

Demystifying higher education: Adriana Caudrey reports on the second-chance degree scheme offered by LANCASHIRE Polytechnic and six local colleges (page 12)



Voyages through thought: T. J. Reed discusses how KANT, who spent a lifetime in provincial Königsberg far from the fashionable intellectual salons of Paris or London, represents the ideal of the true academic, detached yet engaged (page 15)

Rewriting Beveridge: Michael Reddin looks at Norman Fowler's attempt in his recent Green Paper to redraw the map of the postwar WELFARE STATE (page 16)

The essential BRIGGS: Geoffrey Crossick reviews the first two volumes of Asa Briggs's essays and Vernon Bogdanor reviews his short history of the BBC (page 17)

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Echoes of 1981

It is beginning to feel like 1981 over again. In January of that year the Department of Education and Science proposed in a confidential inter-departmental paper that the polytechnics and other major colleges should be removed from local authority control and instead planned and funded directly by a new grants committee for public sector higher education. Premature publicity and the vigorous opposition of the local authorities killed the plan. In the fall-out the National Advisory Body was created, which it is now agreed by most people has been a better settlement of the deep-rooted and entwined problems of local accountability and national planning. In 1985 in an uneasy rerun of the events of four years earlier the Lindop committee has proposed that a few polytechnics should be freed from the tutelage of the Council for National Academic Awards and allowed to manage their own academic standards and award their own degrees unsupervised. This time the opposition has not been so instant or so clear cut; much to everyone's surprise the NAB has been restrained by divisions within its board from savaging Lindop (for the moment). But the issues, although not the same as in 1981, are sufficiently similar to predict a parallel outcome. Just as the abortive "autonomy in government" plan of 1981 led to the creation of the NAB, so the attempted "autonomy in validation" plan of 1985 is likely to shock the CNAA out of its past rigidity and into offering its institutions a new deal.

This is a likely outcome because even among those who are honour-bound to support the Lindop proposals, like polytechnic directors, and those to whom the proposals are immediately and instinctively attractive, like HM Inspectors and less surely the DES, there is a growing suspicion that the plan for highly selective autonomy does not offer a stable and sensible solution to the troubling issues of quality assurance in polytechnics and colleges which Lindop was established to address. It would be a not unhappy outcome because many people (a majority if our own National Opinion Poll survey of higher education opinion is an accurate guide) in polytechnics and colleges, when they have finished being bestially to the CNAA, are forced to admit that the creative potential embodied in the council's practice of external peer review is far from exhausted. The cracks are already beginning to show in the pro-Lindop front. There is no strong reason why the majority of polytechnics should favour a plan that

would favour only a small minority, even on the most optimistic prediction of the Secretary of State's potential liberality. In the short run the "autonomy in validation" proposal would put this majority at an active disadvantage because they would be seen as having failed some test of academic respectability, however unfair such an interpretation might be. Their only advantage under the Lindop plan would be some long-term speculative gain.

The DES and the Inspectorate are also worried about Lindop, but for different reasons. Their criticism of the paraphernalia of CNAA validation was not just that it represented an apparatus of bureaucratic oppression, but also that it was ineffective in safeguarding standards of teaching and learning, the courses which were approved by the council. Their motive, however often it is disguised, is to find out what is really going on in the lecture hall, the seminar room and the laboratory - not, except in isolated polytechnics of North London cases, to impose some ideological orthodoxy but to insist that traditional "higher education" standards are upheld.

The Lindop plan, for all its reassuring words about tougher external examinations, does not really answer this point. Indeed its stress on the necessity of relying on the self-policing of a proper "academic community" is likely to worry the DES and the Inspectorate. After all, their whole policy on schools is based on an unwillingness to trust the self-policing role of teachers; their attitude to higher education, including even the universities, is devoid of its past deference; so why should they be expected to trust the integrity and professionalism of polytechnic teachers without additional security and safeguard? It would be going against the political grain of the times.

Of course it is possible to envisage a version of the Lindop plan that remained quite close to the letter of what the committee has proposed while denying the intention and offending the spirit of "autonomy in validation". An academic advisory committee, backed with the right people and using the Inspectorate as its eyes and ears, could become an oppressive instrument of control and even coercion. No doubt some in the DES will urge this course but the department as a whole, ministers as well as officials, is not yet ready to embrace such an unbridled version of the new authoritarianism. But it is not simply a question of recognizing what is politically feasible and being content with that. There are genuine difficulties with Lindop's re-

liance on the self-policing academic community. In one sense it is an uncontested truism: the quality of higher education depends on higher education teachers. But so does the quality of primary and secondary education. This has never inhibited the many people, inspectors, examination boards, advisers and so on, who have felt that the natural autonomy of the classroom teacher (or lecturer or professor?) should be subject to some external constraint and review. Lindop is trying to translate a pious truism into an operational policy. It is the foundation of any system of quality assurance, but not the finished building.

But if the "autonomy in validation" plan is finally rejected, it should not be solely because of its inherent defects but because the alternative, a liberalized CNAA, offers genuinely creative opportunities for academic development and for the scrutiny of standards within a framework that does not demean the polytechnics. Here there are grounds for real hope.

The CNAA's response to Lindop shows that there is life, and plenty of it, left in the council. While insisting on the need to maintain a national system of quality assurance based on external peer review, the CNAA is now prepared to offer the most mature polytechnics a lower-merit system of accreditation that goes far beyond "partnership in validation". The Newcastle parallel validation model, or even last winter's models A/B initiative.

If the council is allowed to modify its charter and statutes, it has agreed to permit such institutions to validate their own courses and award their own degrees. In earnest of its good faith the CNAA has already made a provisional agreement with Sheffield City Polytechnic along these lines. This offers all that is best in Lindop, the due recognition of the maturity of the institution and its competence to manage its own academic development and standards, while excluding that is worst, the hiving-off of the best polytechnics into some self-regulating clique.

So the Lindop episode, which began with the quite disreputable persecution of FNL social science, may yet have a happy ending. Just as the 1981 adventure in its failure produced the NAB, so a summer of reflection on the anomalies and drawbacks of Lindop's plan for a break-out from the CNAA may lead those with the power to decide to look more favourably on a proper system of accreditation that balances autonomy and accountability, freedom and rigour.

Not long after, the Science and Engineering Research Council's chairman Sir John Kingman was arguing that even if that council kept all the money saved from completely abandoning high-energy physics it would only create a few years' breathing space, such were the demands of assessment, released the DES's latest debate, still argues that budgetary attrition is "squeezing out investment in many new and growing areas of science which are crucial to development tomorrow".

Yet the Kendrew group, looking at ABRAC as a possible sacrifice, has not offered any relief from these pressures. Its targets would seriously compromise the British contribution to CERN, and our ability to support domestic groups using that laboratory's machines. But they would solve none of the problems of funding that loss for an uncertain gain seems a rather cost-benefit bargain. But there are other powerful arguments for sticking with CERN. Particle physics, along with some areas of biological science, has made a notable contribution to both the bulk of our Nobel prizes were, in the end, the other. Retrospectively

would favour only a small minority, even on the most optimistic prediction of the Secretary of State's potential liberality. In the short run the "autonomy in validation" proposal would put this majority at an active disadvantage because they would be seen as having failed some test of academic respectability, however unfair such an interpretation might be. Their only advantage under the Lindop plan would be some long-term speculative gain.

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I write this column on the first of three papers written and presented by the title is *The Fight from the Trenches*. It is not need to apologize for it. In this paper I am

But if I had had any idea of the validity of the generally published my essay on the subject and I must say that I am not convinced.

The essence of the point now seems to be that the generation of enthusiasm for architecture and planning is the vehicle for great ideas shared that belief in the

It now seems like the "Coleman" team which was the socialists' dream of the architects' litter, grime, squalor, and the children in care. The other all of those symptoms are now blocks than in ordinary life overwhelming. It was a 250,000 people.

The conclusion that must be, be important for the academic world is her message the reality of what used to be architectural determinism. The word prohibition is know why. It became a scathing comment among sociologists that architectural minimalism was proven a naive form. It was the case that good environment was good behaviour. It was because no one knows what environment and it is not what constitutes good behaviour.

But the situation is quite different. If you turn the argument down. There can no longer doubt that a bad (or perhaps inhuman) environment can be very difficult to behave positively encourage behaviour. The conclusion of the architects' excitement of the post-war change, either depressing or ironic. What we need after semi-detached two-story houses we had before the war. What for everyone.

Patrick Nutter (From next week Patrick Nutter's column will appear on page 1)

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AUT ballot endorses tough line

by David Jobbins

On Monday Committee A, the first stage of the academics' negotiating machinery, will be told the details of the ballot carried out by the Association of University Teachers under the auspices of the Electoral Reform Society.

But indications taken from informal soundings at a number of universities suggest a high response rate firmly endorsing the AUT's demand for a joint approach to the Department of Education and Science on erosion.

Although the vice chancellors have agreed on the form this approach should take, they have refused to transmit it to the Government until this year's pay claim is settled and have made clear they cannot afford more than a 4 per cent rise.

But the AUT believes the employers are not united in their refusal to make a joint approach and that a positive ballot result may tip the balance in their favour.

General secretary Ms Diana Warwick said: "We hope this result will release the obstruction we have met from the vice chancellors from the beginning and indicate there is the sort of massive support from our members that the employers have been claiming was not there."

The ballot result is believed to be sufficiently positive to encourage union leaders on the level of support for industrial action in the new academic year - which is likely to be focused on Sir Keith Joseph's rejection of an independent committee of inquiry on erosion.

An impasse has developed over clinical salaries, with Sir Keith awaiting a decision from the clinical academic staff salaries committee, while the vice chancellors are refusing to talk to the staff side until they learn whether ministers will make extra funds available to help meet the award paid to National Health Service doctors and dentists.

Graduate jobs market booms

by Adriana Caudrey

Job prospects for graduates have improved dramatically for the first time this decade, although they are continuing to deteriorate for the rest of the population.

This year's crop of 66,000 job-seeking graduates of all disciplines stand a much better chance of getting a job than their predecessors, according to the three main graduate careers and appointments services. Last year there was a 5 per cent rise in the number of graduates who found work straight after leaving higher education, and the figure is expected to increase significantly this year.

The openings are not only in expanding fields such as information technology, but also in retailing and distribution. Competition is also fierce for arts graduates, including linguists, as well as for the more obviously sought after electrical engineers.

There has been a 30 per cent increase in the number of employers seeking to recruit graduates through the fortnightly job vacancies bulletin circulated in universities and polytechnics. This month an unprecedented 20 per cent vacancies were still open.

The Association of Graduate Careers Advisory Services, the Central Services Unit for Careers and Appointments Services and the Standing Conference of Employers of Graduates jointly announced these

prospects at a supply and demand conference on Wednesday.

But they warned that the job boom for graduates is coinciding with the first signs of a gradual decline in the forthcoming graduate population.

Mr Bob Parer, the AGCAS chairman, said: "The most interesting point is that at a time when the general employment situation is certainly not improving, the demand for graduates has been improving. It looks as if the low point in the graduate job market was 1981. Since then it has been constantly improving, with some acceleration over the last 12 months. Until 1984 this was against a backdrop of increased output." He said that the graduate output from universities was now dropping between 3 and 4 per cent, and the polytechnic output was increasing by 8 per cent, which he said represented a "static output".

He added that output had reached its peak and was now starting to come down. He added that the fact that this was happening at a time of increasing demand for graduates had not been taken account of in the Green Paper.

In general it is mechanical, electro-mechanical, electrical and chemical engineers who are among the most heavily in demand. However, it was pointed out at the conference that although demand for graduates is high in the electronics industry, this field is

volatile, partly because silicon chip manufacture has dropped recently.

Increasingly firms are hunting graduates in any discipline. The British Oxygen Company advertised in the current jobs list for 10 graduates with "any degree" for a career in computing. British Gas advertised for a graduate in a "numerate discipline". While Government Communications headquarters in Cheltenham is calling for 70 graduates in electronics, maths, computer science, physics, various languages and any arts degrees.

The AGCAS, the CSU, and the SCOEI emphasized that although the job market had picked up for graduates, this does not mean all graduates will get jobs. In their joint statement they say: "The fact that demand for graduates has risen does not mean that all will obtain jobs. There are complex factors of choice, taste and aptitude which make a precise balance impossible to achieve."

Of last year's graduates, 9 per cent had failed to find jobs by last December, an improvement on recent years. But separate research carried out by the National Union of Students shows that in 1976 graduates formed 6.6 per cent of the total number of unemployed; in 1981, 11.4 per cent; in 1982, 13.2 per cent and only in 1983 did the number begin to go down, to 11.7 per cent.

Joseph drops White Paper hint

A White Paper on the shape of higher education in the 1990s is one of the options actively under consideration by ministers for their response to the current consultation exercise.

Sir Keith Joseph, Secretary of State for Education and Science, this week twice referred to the possibility of a White Paper when facing questions from MPs on the consultative document, *The Development of Higher Education into the 1990s*.

But he later confined himself to telling the Select Committee on Education, Science and the Arts that the Government would publish its response at some time next year the "financial and administrative implications" of the Green Paper policies.

He announced that the consultation period would expire at the end of this year, to allow decisions to be made in time for institutions to implement any changes in policy before they are hit by the decline in the age group from which higher education traditionally recruits.

Sir Keith told the committee that ministers had been deliberately cautious about the impact on the qualified age group of its "better schools" policy. "It is my hope that if the policy... has an effect over the years, then as a result more people will both qualify for and feel keen to participate in higher education," he said.



Professor Lapping. This is Maureen... back page

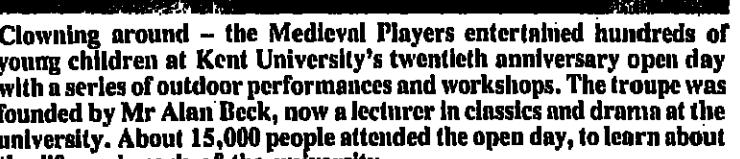
All systems go for UGC

by Peter Aspdren

The University Grants Committee is to step up the pace of its business to cope with the heavy workload anticipated later this year, when it will be starting to implement its selective research funding exercise for universities.

Universities have until November to submit their research plans to the committee, in response to the UGC letter of May 9, asking them to give their priorities and assess their greatest strengths.

From then on, the main committee and its relevant subcommittees will be meeting more regularly to handle the volume of material they have to evaluate. There will also be no visitations to universities in the five months between November and next April.



Clowning around - the Medieval Players entertained hundreds of young children at Kent University's twentieth anniversary open day with a series of outdoor performances and workshops. The troupe was founded by Mr Alan Beck, now a lecturer in classics and drama at the university. About 15,000 people attended the open day, to learn about the life and work of the university.

Unesco proposals may make Britain reconsider

from David Dickson

PARIS

Changes which could lead Britain to reconsider its decision to withdraw from Unesco at the end of this year have been endorsed by Unesco's executive board, and will come before the general conference in Sophia in October for approval and possibly reinforcement.

The 50 members of the board, who have been meeting for six weeks at the organization's Paris headquarters have adopted a report on the two-year programme for 1986/87 which proposes various shifts of funds away from the more politically controversial programmes, such as those on communications and disarmament, towards scientific and technical fields, such as the study of the relationship between man and the environment.

Members of the British delegation to Unesco stress that the board is only able to make recommendations to the general conference. Although the proposals point in the direction of the reforms that Britain would like to see, no decision on whether to implement its threat to withdraw will be taken until after the outcome of the Sophia meeting has been fully discussed.

However, Mme Gisèle Hilmli, the French representative on the executive board, and chairman of the group which drew up the report, said after the meeting that she hoped sufficient progress had been made at least to persuade Britain to remain inside the organization.

Western diplomats say they have also had some success in reducing what they refer to as the more "ideological" components of some of the controversial programmes. The programme on communications, for example, will put greater emphasis on helping specific countries and on training journalists, and less on the "democratization" of communications being demanded by the Soviet Union.

Similarly there was agreement that, in its disarmament programme, Unesco should not concern itself with the technical aspects (considered the responsibility of other agencies) but concentrate primarily on the educational dimensions of the issue.



The BHC is not a very happy organization these days and the appointment of an accountant as deputy director general is not likely to restore it to its former state of bonhomie. The unseating of Alan Protheroe is far from being a disaster, except for himself, and no doubt the new management will be more efficient and possibly more responsible. It is, for example, inconceivable that the top management in its great days would have tolerated, let alone defended, the action of the editor of *Breakfast Time* in burgling a programme from ITV and presenting it as if it were his own.

The chairman of the corporation is another accountant. Since the director general appears to make little intellectual impact, that must mean that the accountants are now in charge. As far as I know accountants are agreeable people but it does raise a question about the values of the whole operation. It may be that higher education has very little effect upon our lives and behaviour but it is my impression that we can never wholly escape the value system and attitudes in which we were trained at the most sensitive period in our lives. The presence of two senior accountants at the top of what is probably the most influential mind-former in the country demands that we think for a moment about what constraints are likely to shape its thinking. It is particularly relevant because the Peacock committee is beavering away rapidly and has to report on the financing of the BBC soon. As the former principal of an independent university, Peacock is expected to be at least sympathetic to the idea of independence. The BBC has already begun to change programme formats to make them as indistinguishable as possible from those of ITV. The *Sir O'Clock News* is now given breaks so that advertisements can easily be inserted; the viewers are now already expecting adverts to appear and feeling slightly disappointed when they don't — especially as the advertisements are now the most brilliant pieces of filming to be seen on the set. Of course they are; they cost more per minute than many an ordinary programme does per hour. The *Radio Times* is already indistinguishable from the *TV Times*. It will be the easiest change ever made.

Now all of this may not mean that the accountants have taken over but it does look very like it. I suspect that a dominance by accountants is dangerous. About 10 years ago I attended a fascinating dinner in 10 Downing Street as a guest of Edward Heath along with a few vice chancellors and polytechnic directors. (Mrs Thatcher was hostess, being then Secretary of State for Education and Science.) A friend of mine who is an avid reader of this column accuses me of constant name dropping so I may as well carry on even though the name in question has been dropped long ago. Edward Heath in his summing up speech said at least twice that a country cannot be run by accountants. He thought academics more important than balancing the books.

Well, he has gone and the accountants have taken over. They are less dangerous than he thought. They can't even balance the books.

Patrick Nuttgens

Clinical pay: myth or reality?

Why teachers feel NABbed

Sir, — I am surprised at the curious comments in the last four paragraphs of David Jobbins's article, "The old story of supply and demand" (*THES*, June 14). They perpetuate the myth that recent salary increases for clinical academic staff are such a drain on funds that universities have been forced to cut back in other areas or that the medical and dental schools have needed to dig into reserves to avoid deficits.

It is necessary to look only at the costs to university funds of pay awards in the years 1982-84 to see how far David Jobbins has gone wrong. In percentage terms the simple arithmetic shows that the accumulated cost to university funds above the Department of Education and Science pay limit is as follows:

For non-clinical academic staff the actual cost over those years was 3.9 per cent and for clinical academic staff 3.4 per cent. In other words, the non-clinical staff took 0.5 per cent more from university funds than did the clinicals. Given the relative numbers in each category for the two groups, the actual

cash (in 1985 figures) that universities had to find was about £24.4 million for non-clinicals and about £1.7 million for clinicals. In the light of these figures there can be no justification for using such emotive phrases as "extra pay for the favoured few" or "a drain on the funds of the rest".

Still further, while clinical academic staff are theoretically more expensive, it should be remembered that many posts are funded by the National Health Service rather than the universities themselves. Again the unfortunate loss of staff brought about by the financial cuts must have had considerable effect on the funds of universities.

According to recent figures from the Committee of Vice Chancellors and Principals, the loss over the last five years for full-time and non-clinical teaching and research staff is 7.7 per cent, while at the same time the loss of full-time clinical staff is a staggering 20.7 per cent. In the light of such points it is difficult to see why recent clinical awards have so often been singled out

for special criticism. Finally, David Jobbins says that the salaries for clinical academic staff have become "embarrassing to union leaders". The position of the British Medical Association and the British Dental Association is quite clear. Between them they hold the vast majority of the staff-side seats on the clinical pay machinery.

While they wish their non-clinical academic colleagues success in their pay, they return to the point that parliamentary approval was given for parity between clinical teachers and their NHS hospital counterparts because the jobs of the two groups were essentially interchangeable. The prime task of the Clinical Academic Staff Salaries Committee is to ensure that parity with the NHS awards is maintained.

Yours faithfully,
J. P. PAYNE,
Vice Chairman,
Clinical Academic Staff Salaries Committee,
British Medical Association.

Lindop report

Sir, — I refer to the letter from the vice chairman of the Association of Polytechnic Teachers (*THES*, June 7) which emphasizes the National Association of Teachers in Further and Higher Education's supposed attitude to the Lindop report and which, taken in conjunction with the rather cryptic references in Karen Gold's report, may leave readers understandably confused.

In a few sentences the APT vice chairman dismisses the common points of dissent, expressed with different degrees of emphasis — by the National Advisory Body, the local authority associations, the National Union of Students, many individual polytechnic directors and polytechnic institutional responses, the Council for National Academic Awards and Naffte. He regards one of the principal recommendations in the report that some institutions should become self validating.

This note of dissent is, we believe, well-founded. How can the APT assert categorically that only a few colleges may remain under tutelage? The Lindop report itself gives no indication of the numbers of institutions it believes will be designated as self validating. At the press conference launching the report Sir Norman indicated that, in his belief, it would be a handful — perhaps five or six initially. The fact is we don't know. It would, however, be to assume that all polytechnics would automatically be so designated by some newly constituted Academic Advisory Council, so it is curious, when even the Committee of Directors of Polytechnics have expressed some concern at potential divisiveness with the polytechnic sector, that APT feels no such qualms.

No doubt the real reason for APT's attitude lies in the comment in Mr Vaisey's letter that Lindop would allow "polytechnics and major colleges to enter the same degree awarding structure as universities". If APT's real aim is to transform the polytechnics into universities they should be honest enough to say so and not use the Lindop report, which is about valid and wider debate.

Naffte has, in fact, welcomed a number of recommendations in the Lindop report, particularly those relating to models of accreditation, which hardly squares with Mr Vaisey's assertion that we have nothing good to say about it. In our evidence to Lindop we made the assumption that self validation is the hallmark of a "mature" institution founded on real and recent evidence about academic standards, or simply a reflection of existing university practice. We are therefore disappointed that the published report provides no evidence but transforms this assumption into an assertion.

Yours faithfully,
MIKE WILKINSON,
Chair: Higher Education Committee,
Leeds Polytechnic.

Overseas work

Sir, — The Council for Education in the Commonwealth produced a report in 1983 which identified the problems facing teachers returning from service abroad seeking posts in the UK.

The executive committee of the CEC has now reconvened its working party on overseas teachers to ascertain whether the difficulties remain, whether official attitudes to recruitment of teachers with overseas service have changed and whether recruitment of teachers for service overseas has been affected.

May I through your columns, ask teachers, and others in education who have experience in these fields, including those who have recently retired, to write to me, c/o the Assistant Masters and Mistresses Association, 7 Northumberland Street, London WC2.

R. V. LELEUX,
Secretary to the working party on overseas teachers,
Council for Education in the Commonwealth.

Open college

Sir, — I enjoyed last week's piece on the Lancashire Poly initiative offering part-time degree units to adults via our local colleges of further education.

Unfortunately, when the article moved on to the Open College it was perhaps unfair to Lancaster University in not recognizing the critical input made by Sir Charles Carter and Professor Alice Ross at a time when such concepts were rarely spoken of, and the North West Open College Federation could and would not have been implemented without the university's committed support.

DAVID MOORE,
Principal,
Nelson and Colne College.

WEA courses

Sir, — I wish to refer to your article "TUC and tutors clash" and in particular to the reference to the Liverpool industrial tribunal case, (*THES*, June 7). It appears that a series of nasty, last minute phone calls by your reporter has led to a complete misrepresentation of the situation.

First, there are two basic errors of fact in the article, namely (i) Ms Healey had not returned from maternity leave and (ii) at no stage during the case referred to (as was suggested that she had arisen out of the fact that she had criticized current trade union course content or attempted to incorporate discussion of wider issues).

Second and following on from this, I am unable to understand why this case

Letters for publication must arrive by Tuesday morning. They should be as short as possible and written on one side of the paper. The editor reserves the right to cut or amend them if necessary.



Adam Smith

Sir, — I am disappointed that no Adam Smith scholar has taken the opportunity to enlarge upon your third leader (*THES*, June 14), "The thoughts of Adam Smith".

Smith was more precise than your selective quotation implies. The "ignorant and capricious" extraneous jurisdiction which Smith referred to has three exemplifications in *The Wealth of Nations*: "The bishop of the diocese for example; ... or, perhaps, ... some minister of state." Given that Adam Smith has been one of the current Secretary of State for Education's favourite authors, it was rather coy of you, if not downright remiss, to neglect this most pertinent aspect of Smith's views on government ministers in relation to higher education.

Yours faithfully,
J. R. CHRISTIE,
Assistant sub-dean of arts,
University of Leeds.

has been quoted in the article as it has no bearing on issues relating to course content. The case arose over the allocation of courses to tutors, and throughout the Workers' Educational Association maintained that Ms Healey had been treated no differently from any other tutor. The settlement refers to teaching being allocated in accordance with procedure formalized in a WEA/Association of Scientific, Technical and Managerial Staffs group meeting.

The WEA responded to a request by the applicant for an out-of-court settlement simply to avoid incurring very considerable legal costs and with a view to maintaining harmonious relationships — it was in no way an admission of liability or discrimination by the WEA.

I am extremely concerned therefore that your article should suggest that so far as this particular incident was concerned there was any discord between ourselves and TUC officials, which was most definitely not the case. The kind of problems raised in this case are basically the result of a situation of unemployment involving

Sir, — The concerns expressed recently by the undergraduate primary teachers' union conference and the University Council for the Education of Teachers (*THES*, June 7) about being "CATed" are timely and some sense and sensitivity to teacher education provision.

Those of us in primary teacher education in the process of teaching intakes, are likely to feel the concerns even more acutely. To stop — crawl policies — the last 20 years have contributed mechanisms arising from a misuse of the proscription of the Accreditation of Teacher Education criteria: the use for tutors to have had recent relevant classroom experience and ability to provide two years' full-time in "subject studies".

In the light of the drastic contraction of the 1970s it is hardly surprising that institutions have been unable to recruit large numbers of staff with recent classroom teaching experience. However, many teacher education institutions by working alongside teachers in classroom-based enquiry and research, the better to improve classroom practice and to inform developments in primary teacher education. Such subtleties seem to elude those who operate simplistically the equation: "recent, relevant classroom experience = employment as school teacher."

Equally simplistic is the blind advocacy of the 50 per cent subject study apportionment in the BED degree. What arguments are advanced for the relevance and appropriateness of this to primary school teachers? "Discussion and negotiation" appear to have been excluded from the agenda of both the CATE and the National Advisory Body. Some of those institutions which have fallen foul of the NAB "viability" criteria, and are threatened with closure, have done so because their student numbers are deemed to be too small to permit a wide range of subject study options.

That they might well have developed courses which provide an integration of subject studies, professional practice and methods of enquiry seems to have been ignored by those concerned with the automatic application of crudely-formed criteria.

It is evident that unless some sanity is brought to bear on the situation by those concerned with more than the exercise of bureaucratic writhing, the processes of CATEing and NABbing will combine to impose upon teacher education a model entirely alien to that developed through the evaluation of primary school practice, negotiation with primary school teachers and the acknowledgement of primary school traditions.

BRIAN ALLEN,
Senior lecturer,
School of educational studies,
Portsmouth Polytechnic.

an ever-growing number of graduates who, having in many instances struggled as mature students to acquire qualifications, can find no employment. They consequently become dependent upon a system of part-time teaching which was never designed to be used in this way — and which itself will come under threat if the present trends continue. This district has for many years sought additional full-time posts, but the Department of Education and Science has not been able to respond.

This situation is by no means peculiar to the WEA but applies to the whole sector of part-time tuition in universities and local education authorities. With generally diminishing resources for adult education and the cuts faced by the WEA and university extramural departments, there will be growing tension on matters of this kind.

Yours faithfully,
DAVID CONNOR,
District secretary,
West Lancashire and Cheshire District Workers' Educational Association.

Business schools 'must grow'

by Karen Gold

University and polytechnic business schools should increase the number of Master of Business Administration students almost tenfold to 10,000, university management professors are telling Government ministers this week.

Three junior ministers — Mr Peter Brooke for higher education, Mr Peter Morrison for employment, and Mr Norman Lamont for trade and industry — are part of a special working group on management education which was due to receive proposals from the Conference of University Management Schools.

The proposals follow a study sponsored by the Economic and Social Research Council into management education, carried out by Professor Peter Forrester, the former head of the Cranfield Business School. They say that the number of MBAs needs to be increased from around 1,100 to graduate this summer to 10,000 in order to combat "the abysmal level of educational attainment in British management."

The paper says that current growth could lead to an output of 5,000 MBAs by 1990, through marketing of the full-time course, planned expansion of part-time study, development of distance learning and in particular the Open University.

But it also calls for an eventual

annual total of 10,000 a year as part of an overall programme for management education. This includes: increasing the number of institutions running management education courses; an improvement in staff/student ratios which the paper says are the worst of any university subject area at 12.8:1; improvements in equipment and buildings; greater freedom to charge market rates; research into the needs and provision of management education; more flexible entry requirements for students; and better funding from the Government directly and indirectly through grants to industry and sponsorship of students perhaps through tax concessions on loans.

British business schools should be privatized over three years in order to create an ethos in which they serve business, according to a paper published this week by the right-wing Institute of Economic Affairs.

The paper, by the dean and academic sub-dean of the City Business School, Professors Brian Griffiths and Hugh Murray, outlines a six-point plan for privatization. Postgraduate and undergraduate business education should be separated; all postgraduate schools should become autonomous legal entities; public funding should be phased out over three years; salaries and terms of conditions at the new schools should be determined by the market; schools should be managed by boards of directors; and research fund-

ing should continue under the ESRC, they say.

The authors claim the move would save taxpayers £10 million a year. But its main benefit would be to change the business schools. They say they have failed to produce planned numbers of business graduates, whose teaching is constantly questioned by the university system and who have developed "an ethos which is risk-averse, secure and non-entrepreneurial."

Privatization would introduce a market discipline so badly managed schools would risk going out of business. "This prospect would act as a powerful incentive to focus the minds of those in business schools on ensuring their product mix, its quality and design and price were attractive," they say.

Salaries would increase to mirror those in business and market pressure would ensure good teaching. It would also be an example, particularly to engineers. "The deregulation of business schools should be seen as a first step towards the deregulation of all postgraduate vocational training in British universities."

Whose business? A radical proposal to privatize business schools by Brian Griffiths and Hugh Murray, £2.50 from the Institute of Economic Affairs, 2 Lord North Street, London SW1P 3LB.

Leader, back page

College part-timers 'a national resource'

by John O'Leary

For the second time in a week, a Government-sponsored inquiry has found that more students could be taught in polytechnics and colleges at little extra cost.

A report by Her Majesty's Inspectorate describes part-time advanced further education as "an underutilized national resource". It finds that increased enrolments on many courses would have advantages for the quality of the education of the workforce and would involve a "relatively small marginal cost".

Coming so soon after the Audit Commission's verdict that 75,000 more students could be accommodated throughout further education, the HMI report is bound to increase pressure on the institutions. But the inspectors also acknowledge that many colleges are strongly committed to part-time courses and have only limited powers to influence recruitment.

Resources could be better used if teaching groups were generally larger, the report says, but employers' attitudes and geographical factors often constrained recruitment. The average class size out of 1,600 visited in 48 institutions was just over 15, and those of fewer than 10 students were often in rural colleges, where the nearest similar course was up to 75 miles away.

"Most colleges will not turn away suitably qualified applicants to a part-time course, even if their admission means creating teaching groups of an undesirable size," the report adds. "This implies the institutional commitment to the part-time students."

However, inspectors believe there is still much that institutions can do to improve provision through combined teaching with other courses. Where this was not possible, some colleges

were found to be struggling to maintain viable enrolments in the face of financial stringencies.

The report covers vocational courses in eight polytechnics and 40 colleges in England and Wales. The vast majority of the 11,000 students observed had jobs, although it was noted that an increasing number of unemployed students were joining courses. Almost all of the students lived within a 20-mile radius of the colleges they attended, but round trips of up to 100 miles were found in rural areas and even one of 400 miles, where the student had been transferred by his firm.

About 90 per cent of the teaching seen was described as sound and some 15 per cent of that was good. In only one class in 10 did the standard fall below an acceptable level.

All courses were adequately staffed, although difficulty in attracting young staff from industry had made some specialisms difficult to cover.

Agribusiness Youth Training Schemes throughout the country have been praised by HMI as successful introductions to work, training, and education. But the inspectors draw attention to the fact that facilities for "off-the-job" experience range "from excellent to unacceptably poor."

They say these discrepancies have arisen partly because of delays in the release of Manpower Services Commission cash for temporary facilities. As a result some centres have resorted to providing inadequate makeshift accommodation.

Part-time advanced further education: An HMI survey of vocational courses in 48 institutions was just over 15, and those of fewer than 10 students were often in rural colleges, where the nearest similar course was up to 75 miles away.

Leader, back page

AUT ballot backs a tough approach

continued from front page

dispute was found to justify a formal meeting of Burnham next Friday.

The deal on offer is likely to include a solution to the longstanding problem of staff stuck at the top of the Lecturer scale. Employers' leader Mr John Pearnman said: "I believe we have the ingredients of a settlement."

It is the second time that lecturers have been close to clinching a deal which would have improved on the cash on the table together with structural reforms. But that initiative, also led by Mr Pearnman, was scuppered by Conservatives on the Association of County Councils and the DES.

Now the county council elections have changed the political complexion of the further education panel, which is expected to number three Labour, three Conservatives, one Alliance and one Independent.

Mr Pearnman admits that selling a settlement to the DES will be difficult in the wake of the Audit Commission report and the public expenditure atmosphere.

Negotiating secretary of the National Association of Teachers in Further and Higher Education, Mr David Trieman, described the outcome of the talks as sufficiently positive to make a Burnham meeting worthwhile.

Poly names its new director

Oxford Polytechnic's new director is to be Dr Clive Booth, currently staff inspector for higher education in HM Inspectorate.

Dr Booth, 42, was appointed this week but his starting date is not yet decided. He was deputy director of Plymouth Polytechnic from 1981-84 and joined the inspectorate last autumn. He was also HMI's advisor to the Lindop committee on public sector validation.

Meanwhile three officials of the National Association of Teachers in Further and Higher Education in the polytechnic's Headington branch have resigned after the branch members failed to support them in calls for the director's appointment process to be suspended.

After the withdrawal of North East London Polytechnic director Mr Gerry Fowler, Naffte representatives called for the suspension of the procedure, by then at the stage of final interviews. But a subsequent branch meeting refused to endorse the call.

Political row erupts over governors

A political row has broken in Buckinghamshire over the appointment of governors to the county educational institutions.

So far problems over the appointment of county council representatives to governing bodies have been confined to adult education centres and youth clubs. But in the next month it is expected the argument will reach new heights with the appointment of governors to schools and colleges of further and higher education.

The row centres around the decision of the controlling Conservatives to take an exceptionally hard line over the appointments.

In one instance a Liberal county councillor was rejected in favour of the failed Tory candidate to serve as county council representative on the governing body of an adult education centre.

In another area, a Social Democratic Party county councillor was refused a place on the governing body of an institution, with the appointment going to a Conservative who is not a member of the county council.

Moves by the Conservatives to implement the new policy led to a row at the recent meeting of the council's youth and community subcommittees, with both Alliance and Labour representatives complaining bitterly about the situation. More protests are expected next month when the council deals with the bulk of appointments to governing bodies through its schools and further education subcommittees.

Mr Francis Robinson, the Conservative group leader on the county council, denied the appointments so far had been made on a purely political basis.

Cash crisis threatens delay in new Alvey computer projects

by Jon Turney
Science Correspondent

A £5 million cash shortfall over the next two years threatens to delay new university projects in the Government's Alvey programme for advanced computer research.

The cash flow problem, in the part administered by the Science and Engineering Research Council, will be especially severe for work on new computer architectures — which has taken longer to set up than other Alvey projects. Mr Brian Oakley, the overall director of the programme, said this week some projects would be delayed or even abandoned if a complete solution was not found.

The problem emerged during a conference at Edinburgh University to discuss progress in the first two years of the £350 million, five-year programme.

and government research establishments in an effort to master new technologies.

Mr Oakley told the conference the cash shortage had three causes. The SERC only received £37.5 million towards its £50 million share of the programme and was still £2 million short of making up the full sum. The council had used some Alvey funds for other computer research in the early stages of the programme, which would not be paid back until later. And the university contribution to Alvey was larger than predicted.

This meant that around one in ten of the 170 Alvey projects already approved were held up, even though industrial partners were ready to start in many cases. The directorate wanted the department of Trade and Industry or the Ministry of Defence to help bridge the gap until all the SERC funds could be released, possibly in 1987.

Mr Oakley said another major problem with the programme had been lack of support from the University Grants Committee which had made accommodation for large Alvey project teams "impossibly difficult".

Dr John Burnett, principal of Edinburgh University, estimated that 22 universities had put £2 million into capital investments tied to Alvey. Mr Oakley said any future programme on Alvey lines must include earmarked UGC money to match that from the SERC.

There is no clear indication of Government intentions toward a second-phase Alvey programme, although all the first allocation of funds will be accounted for by the end of this year. But several speakers from the directorate pointed out that most of the research plans drawn up under Alvey recognised the need for longer-term work.

technology research are likely to be tied closely to new European initiatives, particularly the yet unlaunched programme Eureka — the European Research Cooperation Agency — being promoted by the French government. Mr Oakley has visited France to discuss the Eureka plan, which is intended to link research to efforts to create a Europe-wide market for high-technology products.

The British attitude to Eureka will become clearer this weekend, when Mrs Thatcher the Prime Minister attends the European summit meeting in Milan. Professor Sir Ronald Mason of Sussex University, in his keynote address to the Alvey meeting, stressed the importance of working out the relations between national plans like Alvey and European programmes. He said there was a greater political consciousness of the importance of high technology than at any time in the last 20 years.

Professional Association of Teachers

99 Friar Gate, Derby DE1 1EZ
Tel: DERBY (0332) 372337

PAT provides professional and legal services for lecturers in colleges of all kinds. It is a fully certified trade union.

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Professional Association of Teachers, FREEPOST, Department HE, 99 Friar Gate, DERBY, DE1 1EZ (1985).

DON'S DIARY

FRIDAY

Two weeks now since my arrival in Moscow. Entry to historical archives still not gained. Resigned to another sultry day in Lenin Library. Outside the foreigners' reading room further distractions. The prospect of an hour-long queue for coffee followed by a seemingly longer hour trying in vain to postpone the trip to the toilets. Recollections of smog from smoking room fused with odours reminiscent of French municipal latrines.

The activities of the last two hours have successfully numbed the appetite so lunch can easily be foregone. Earlier enthusiasm for queuing for xeroxes and microfilms has also diminished. Instead, a quiet afternoon in the library, gazing over the snow-capped cupolas of the Kremlin, interrupted only by the whistles of the apparently omnipresent militia men giving chase to thwarted Nikki laudis. Squinting at Cyrillic letters under the dim desk lamps, the thrill of research in the Soviet Union suddenly resurfaces.

SATURDAY

After the traumas of Friday and poor night's sleep, a brisk early run seems just the answer. Gull, moreover, at such irregular running is not completely absent. Kitted out, the day begins. Hand in key to key-lady but remember to keep hotel pass in track suit pocket.

More fibs about running: I'm well aware that it's 7.15 am, that it's minus 30°C and yes, I do have my hotel pass. Woolly hat pulled firmly over ears, roars of background laughter and the final hurdle to surmount: the fight to pass the hoards of sun-hatted males of all shapes and sizes now attempting to join the hotel breakfast queue.

Morning passes peacefully in Lenin Library. Pleasant pre-prandial chat with English academic whiles away the 45 minutes spent queuing. "Shall I fetch the wine today?" I volunteer, but return with two glasses of murky tepid water. Fish soup, followed by potatoes, vegetables (overcooked) and black bread. Delicious sweet as compensation. I comment, seizing a saucer containing something resembling junket splattered with jam. English academic turns away in disgust.

SUNDAY

An easy decision not to run this morning. Warm shower reminds me of need to convince my body that it does exist after yesterday's exposure. Early breakfast instead of preparing for today's onslaught on writing. No queue of breakfast. Could everyone be sleeping in? Sudden realization of the awful breakfast on Sundays. Make do with black bread and cheese washed down with numerous cups of piping hot but weak tea and off to Lenin Library. At least it's open on a Sunday. Comparatively uneventful day. The material I need is still there, ready to be copied. Most eventful moments of the day - lunch and tea breaks and chats with foreign scholars.

MONDAY

Awoken by solemn music on radio. A while before its significance sinks in: Doesn't the radio always sound like this? This is different - it's

continuous. Dash down to breakfast. Much gossip at table of American scholars. This was an historic moment to be in the country they assure me. No papers at the kiosk in hotel lobby. This surely confirms our suspicions.

But no time for further speculation. Had planned to be at Social Science Institute before 9.30 am to use books reserved on an earlier occasion. This initial visit somewhat fraught. Babushka on door had barred my entry. Where was my pass? "I need to come in to obtain one." Too casual a reply it appeared. I couldn't enter without a pass. Cutch 22. Fortunately no problems arise this morning.

Before departing from institute ring foreigners' section at university. Incredible news, I'm granted permission to use archives. Still reeling from shock. I leave for Lenin Library. Tight schedule: must get there to attempt to get photocopying done that was refused on Saturday. Bus filled with conversation about Chernobyl. A young man is explaining to an old woman what has happened. So it's true, I learn, confirmed it seems by the official news bulletin.

TUESDAY

A brisk run followed by a quick breakfast so as to arrive early at the archive. Would I be refused entry? Babushka at entrance refuses to take but and coat. She doesn't recognize me. Up the stairs to encounter next obstacle. Militia man worried about photo on passport (with beard) not corresponding to photo on visa (without beard).

Material already waiting for me. It seems my lucky day. So new joy at this success. I take only one short break for tea. When archives close, leave for Lenin Library to share news of my good fortune with others.

WEDNESDAY

Leave for archive early in morning just in case it closes tomorrow for the funeral. Centre of city to be closed off but not, it seems, the library. Must do shopping first. Appearance of pasteurized milk in cartons, a luxury unknown seven years ago. Queuing to pay for items and queuing again to collect them provides ample time for thought.

Day at archive passes off uneventfully. Quick snack at cafe before setting off for Chekhov play with English colleague. Signs of relief when we arrive at theatre. The performance has not been cancelled this evening. A curiously sensual performance of *Three Sisters* and some superb acting marred only by a revolving stage that revolves at every opportunity.

THURSDAY

Early run was extra quiet. Few people at work on this solemn day. Most of them enjoying a well-earned rest. Nothing very unusual at the archive; we're only aware of the funeral through the horns honking and the sirens wailing. The Soviet archive assistants spend most of the day huddled together watching the events on television. For once we're alone.

By now I'm itching to see some new material. My current stock will soon dry up. Next batch of material applied for but news not good: decision on remainder to be made "in due course". Feeling dejected, make my way to Lenin Library to meet colleagues. We had planned to eat before watching the evening repeat of the funeral.

Arrive back late at my hotel. Just remembered that phone call expected from England. No message and no call so decide to retire for the night. Second time that I'm asked whether Sasha is at home, I'm reminded that internal communications are still a problem everywhere. Fortunately before I can discuss Sasha's whereabouts a third time I drift off to sleep.

John Channon

The author is lecturer in economic history at the University of Lancaster.

Snap survey on brain drain

by Jon Turney

Science Correspondent
The Advisory Board for the Research Councils has begun a short, sharp study of the brain drain of British scientists to try to present evidence to the Department of Education and Science this summer.

The board told the Secretary of State for Education and Science, Sir Keith Joseph, it was firmly convinced there was an increase in scientific emigration in its initial advice on the 1986 science budget.

Now, the ABRC chairman, Sir David Phillips, has written to the 19 research groups who reached the short-list for the University Grants Committee's recent allocation of extra equipment funds, asking if they have had problems keeping their best people in Britain.

Board members are sure there is a problem but need good evidence to back their claim before Sir Keith.

However, the new study is risky as the groups selected by the UGC may be so good they can persuade their researchers to stay more easily. At least one at University College, London, has just tempted a young British researcher back from the United States.

Sir Keith conceded there was reason to be concerned about the brain drain in the recent Commons debate on science policy but did not propose any specific action. The board hopes more data on the issue will strengthen its case for more funds. But the only recent study of scientists leaving Britain, in biotechnology, found the outflow was not very serious.

Dr David Parsons, of the Institute of Manpower Studies at Sussex University, one of the authors of the biotechnology study, stressed the difficulty and expense of doing a wider study. And he said it was important to examine researchers' reasons for leaving. "There is very limited quantitative

information on the scale of the drain and the motivation of individuals," he said.

The ABRC study will be general, quick result, and should be finished by August. However, the Royal Society's new policy studies unit is also planning a larger independent study of the brain drain. Details have yet to be finalised but the society has asked for help from other learned societies, including the Institutes of Physics and Biology.

If the ABRC effort does not produce the results required by the Society of study should be completed in a year or a year later. This will be the issue alive in next year's size budget debate.

Sir Keith remains unconvinced there is a net outflow of top scientists and technologists. But he told MP's last week that if evidence of a "net brain drain" accumulated as opposed to an exchange of brains, it would be a worrying.

DES faces reshuffle on pool cash

by Karen Gold

The Department of Education and Science may have to redistribute advanced further education money to English and Welsh local education authorities, following a High Court judgement that the basis of payments to the 1985/86 pool are unlawful.

The DES is considering an appeal against the judgement which follows a case brought by the Inner London Education Authority, arguing that the existing formula for contributions to the pool was unfair. The formula is based on a mix of an authority's school population and its non-domestic rate income.

The department refused to reconsider the formula because the county and metropolitan local authority associations had failed to agree a new formula, and because the existing one redistributed money away from the wealthiest authorities in terms of non-domestic rate income, which is ILEA.

But Lords Justice Mann and Cattle ruled that an authority's wealth was nothing to do with the pool distribution. "We cannot accept that a system of grant by government to local education authorities should be based on the wealth of the authority," they said. The judgement says, "Such power should be expressly conferred. Under the (Education) Act of 1944 a local education authority is concerned with the inhabitants of its area and not the inhabitants of other areas."

The judgement suggested that an appropriate formula for contributions to the pool would be related to the demand for advanced further education. Such a formula, which would be welcomed by ILEA, would undoubtedly distribute money away from net exporters of such students - particularly the shires - and towards those authorities supplying the demand, notably ILEA.

Local authority associations are waiting for a DES decision, and no meeting of their pooling committee is fixed. But ILEA points out that the Government should not wait until next year to change the formula, since the judgement means the pool has been unlawfully distributed since April.



Glasgow's lord provost, Mr Robert Gray, and Baillie Jean McFadden, leader of Glasgow District Council's Labour group, were among 80 people arrested by Strathclyde University students posing as South African security police.

The publicity stunt was part of a campaign to raise money for a scholarship fund enabling a black South African undergraduate to study at Strathclyde, in honour of the jailed black South African leader, Nelson Mandela. The stunt lasted for 22 hours, marking by several notable figures, spent the night in a mock-up of a South African jail, sleeping on cardboard and fed on gruel.

Natthe fears internal war

by David Jobbins

A dispute with its own officials threatens to break out in the college lecturers' union over the composition of its delegation to the Trade Union Congress in September.

Officials fear that they may be barred from the delegation if a recommendation from the executive of the National Association of Teachers in Further and Higher Education is rejected by delegates to its national council tomorrow. The executive is proposing that at least three officials including Mr Peter Dawson, the general secretary, should be part of the 15-strong delegation. But a minority on the executive feels that the delegation should comprise members with an exception made for Mr Dawson.

They argue that officials, who belong to the Association of Scientific, Technical and Managerial Staffs, may

suffer from conflicting loyalties and are not fully accountable to Natthe's decision-making bodies if they break with union policy.

But the majority view, shared by the officials themselves, is that employees of the union are fully accountable and that it would be inconceivable for them to step out of line in the event of a clash between Natthe and ASTMS policy.

The extent of opposition to the executive plan is difficult to judge but if it is defeated a full-scale dispute is certain. Anger is believed to be greater among regional officials, who are guaranteed a place on the delegation if the scheme goes through. One step ASTMS may consider is to instruct its members not to attend the congress.

This would severely hamper Natthe's activities particularly in a year when teacher unions will want to maximize contact with other unions if their pay dispute remains unresolved.

Strathclyde opens its books

Strathclyde University submitted its finances to international scrutiny this week at a seminar for newly-appointed European university rectors.

The seminar, jointly organized by the European Rectors' Conference and the Organization for Economic Cooperation and Development, was attended by 15 heads of universities from Finland, Norway, Greece, the Netherlands, Poland, Canada, Germany, Malta, Spain and the UK.

The main theme of the informal conference was entrepreneurship in universities, and senior Strathclyde staff were interrogated by a pseudo

audit groups on links with industry. Strathclyde is currently in fifth place among British universities in terms of industrial research contracts, attracting £910,000 in 1982/83.

The rectors also went for a cruise on a mist-enshrouded Loch Lomond and visited Glasgow's Burrell Gallery.

One of the conference organizers, Mr Bart de Schutter, former rector of Vrije Universiteit in Brussels, said that while money was generally put forward as the reason for universities to be more business minded, it was equally vital to maintain links with industry to evolve with the rapidly-changing frontiers of science.

'No redundancies' pledge to senate

by Peter Aspdon

The vice-chancellor of Sheffield University, Professor Geoffrey Sims, has assured the senate that there will be no compulsory redundancies as a result of the financial cuts threatened by the Government over the next few years.

He gave the assurance during a senate debate on a financial document which threatened the loss of 435 jobs across the university by 1990. The document said the cuts were the only way of dealing with a reduction in its resource base of 15 per cent in the next five years, the most pessimistic prediction outlined by planners.

Professor Sims said the university was determined to enforce any necessary staff reductions by premature retirement or voluntary redundancies.

But lecturers are still not happy about the way the document, prepared by the university's finance committee, has been presented, and remain sceptical of the vice-chancellor's remarks.

Dr Stuart Bennett, secretary of the local Association of University Teachers, welcomed the assurance of no sackings, but said more details were

needed of the terms of any possible early retirement or voluntary redundancy scheme.

"We are aware of the problems facing the university, and want to do anything we can to help. But there needs to be more discussion and consultation on any future job losses," he said.

The major criticism against the finance committee's document is that it represents a very sudden turn-around from a year ago, when we were announcing a scheme of expansion to stimulate teaching and research.

"I think the university now admits it would have been better to present any future staffing savings in terms of money rather than job numbers, which was a projection by a firm of accountants."

The senate asked the academic development committee to review the present academic plan, trying to preserve the university's commitment to academic needs, but bearing in mind the current financial situation.

The controversial discussion document will now go before the university council which will decide whether to approve its findings.

NERC hits back at report

The Natural Environment Research Council's chairman, Mr Hugh Fish, has reacted angrily to a report from the Royal Society criticizing administration at the council's headquarters.

he said he took great exception to parts of the society's report on British geophysics, published a few days ago. The report says the council is bureaucratic, insensitive, and makes poor use of expert scientific advice. The criticisms apply mainly to the NERC's handling of geology, oceanography and atmospheric sciences, but the report implies they may also be justified in other areas.

Mr Fish said this week he wished to emphasize that neither he nor the secretary of council, Dr John Bowman, were given a chance to reply to the charges before the report appeared. He would be asking to discuss the report soon with the president of the society, he added.

Mr Fish declined to comment further, citing the comment of Dr Christopher Jewell Smith last week on Sir John Kendrew's report on high-energy particle physics that it was important for scientists not to fuel interecine struggle but to do battle for science generally.

Colin Welland is standing in front of one of Britain's major gas pipelines. Gas provides getting on for sixty per cent of all the heat used in British homes - and the way all that energy is transported about the countryside is one of the reasons why Colin is keen on gas. Because gas is delivered direct to Britain's homes and factories through a network of over 150,000 miles of hidden, underground

pipes - no lorries, trains or tankers needed, and no pylons to spoil the view. But the fact that it goes underground isn't the only beauty of gas. It's also the cleanest of fuels to burn. Which helps to keep the air purer. So it's not just gas customers who benefit. Britain benefits because people prefer gas.



Flights of fancy: Newcastle Polytechnic fine art graduate Richard Broderick with his flying machine sculptures, included in the polytechnic's fine art exhibition this week.

Cutbacks slowing down women students' progress

by Adriana Caudrey

Cuts in higher education are putting the brakes on inroads women have been making into universities and polytechnics, according to the Equal Opportunities Commission.

The female university undergraduate population dropped last year for the first time this decade from 101,450 to 99,988, thus slowing down women's race to catch up with their male counterparts who still account for 59.1 per cent.

Despite this setback, women formed a slightly higher proportion of all undergraduates last year than in 1983, having crept up from 40.6 per cent to 40.9 per cent. This is because the number of male students has also declined.

These figures are released in the EOC's latest annual report, which

charts women's progress in work and education. A commission official commented that the dip in the number of female undergraduates was particularly serious "because they started from a very low base and were so behind compared with men".

She pointed out that cuts in arts and humanities - traditionally female fields of study - were partly responsible for the overall decline in women undergraduate numbers. For example, the percentage of women studying arts subjects, other than languages, fell from 54.4 per cent to 53.8 per cent between 1982 and 1983.

She added that when arts avenues were closed to women, they could not move easily into science and mathematics courses, because they tended to lack the necessary A level qualifications.

Students urged to 'spy'

The Scottish Anti-Vivisection Society is urging colleagues and students of a Glasgow University professor of neuropathology to become "moles" about his work.

Professor David Graham has already been singled out as a target for protests by the society for his involvement in controversial brain damage research on monkeys conducted jointly with Pennsylvania University.

But Mr John Robins, the society's organizing secretary, says the SAVS has "rather neglected" Professor Graham's work within Glasgow University through concentrating on "the infamous transatlantic link". Professor Graham has conducted research on the frozen brains of baboons and monkeys subjected to brain damage at Pennsylvania in experiments condemned as "horrible" by the SAVS.

In December, the society held a demonstration outside Professor Graham's home, delivering a giant Christmas card depicting a monkey undergoing an experiment.

This week, SAVS members picked Glasgow University's Garscube estate, handing out leaflets with alleged details of Professor Graham's work on primates and rodents.

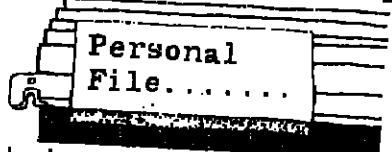
Although the work at Garscube was publicly funded, the public received no details of what went on in its laboratory, said Mr Robins, and he urged staff and students "to perform a public duty" and inform the society of work being carried out by researchers.

The society alleges that Professor Graham's work includes adult baboons being given artificial brain haemorrhages and rats being given lesions, put in a plaster cast and taped to a lead brick.

Professor Graham was unavailable for comment and a Glasgow University spokeswoman refused to reply to the SAVS claims.



Returning to his Imperial past



Personal File
by Jon Turney
Science Correspondent

How many academics could resist an invitation to take charge of the institution where they began their higher education? Certainly not Professor Eric Ash, who succeeds Lord Flowers as rector of Imperial College, London this October.

It is no secret that Professor Ash, a distinguished electrical engineer in his late 50s, has been approached to consider vice chancellors elsewhere in the past. But it took an overture from the college where he took his undergraduate and postgraduate degrees just after the war to tempt him away from University College London.

The transfer from Bloomsbury to South Kensington will mean moving from heading a single department in the largest component institute of the University of London to getting to grips with a college of the same age which has kept its independence from the federal university.

Professor Ash is reluctant to be drawn on his approach to Imperial just yet - he was heard early on Monday morning graciously fielding questions from the college's student newspaper on overseas students' treatment in the college and relations with London University. But he is prepared to admit concern to maintain teaching standards.

He also declares he will be necessary to students, though "they may have to come to see me in unusual hours". His lack of opportunity to think deeply about Imperial College so far stems from a variety of pressures. His department at UCL, electrical engineering, is on the crest of a wave, planning a new building to accommodate new staff, celebrating its centenary, and only last week hearing of a £400,000-plus award from the University Grants Committee in its selection of groups for extra equipment cash.

This is formally designated for Professor Ash's own research group, but in practice will be used by other workers concentrating on developments in optoelectronics.

Aside from domestic matters like the imminent marriage of one of his five daughters, he is also distracted from contemplating his new post just now by his commitments to national science policy debates.

Professor Ash is becoming ubiquitous: membership of the Science and Engineering Research Council's



Professor Ash: becoming ubiquitous

information engineering committee led to involvement in the Alvey computer research programme; he is now on the Alvey steering group, and chairman of a SERC committee considering what comes "after Alvey".

In addition, he was a member of the Kendrew committee on high energy physics, whose recently published conclusions he staunchly defends, especially the finding that there are other studies just as fundamental as research into sub-nuclear particles. And he is chairman of the joint committee of the Engineering and the Fellowship of Engineering on education.

Aside from these duties, his research interest has been in new techniques of microscopy, developed over 30 years at UCL, and before that at Standard Telecommunications and as a research fellow at Stanford in the early 1950s. It was at Stanford he met his wife who provided evidence against his current half-serious view that the make sure PhD students marry before they consider leaving Britain, by persuading him to return.

He is clearly committed not just to his subject but to the development of British technology and is privately critical of the current Government's research policies. Friends indicate his politics are of the centre, like his Imperial College predecessor, and he is cautious in public.

But the college has acquired a head with a good track record in exploiting strengths in research to attract funds as much as sponsors' policies grow more selective.

news in brief

Research council chairmen

Professor Bill Mitchell, of Oxford University, will be named shortly as the next chairman of the Science and Engineering Research Council, to succeed Sir John Kingman this autumn. He is a physicist and director of the Clarendon Laboratory.

The Department of Education and Science has confirmed that Mr Hugh Fish will be full-time chairman of the Natural Environment Research Council until 1987. Mr Fish initially agreed to act as part-time chairman for a year from October 1984.

Fish compliment

The Government has nominated a team of scientists from Stirling University's Institute of Agriculture for this year's UNESCO science prize. The multidisciplinary team of veterinarians, geneticists, nutritionists, biologists and engineers have developed an intensive culture system for farming tilapia, the most important farmed fish of Africa and South East Asia.

Solder to solder

Plans to develop a joint engineering faculty between University College Cardiff and UWIST - the anticipated first step towards a merger - has been given the go ahead this week by the University Grants Committee. A £2 million planning scheme to expand and adapt the buildings used by University College Cardiff engineering department has been accepted.

Change of use

A new School of the Built Environment has been set up at Queen's University, Belfast. It will operate within the faculty of engineering and will incorporate the architecture, civil engineering and town and country planning departments.

'Hard sell' urged to attract best teachers

Teachers' employers should join the annual "milk round" in universities with other professions for a share of the best graduates.

That is the view of the Advisory Committee of the Supply and Education of Teachers which has warned the Government that unless teaching gets some "positive marketing" an increasing number of graduates will be lost to the profession.

Already, there has been a shortfall in teacher training recruitment because of the upturn in general graduate employment prospects, it says.



Let them eat cake... Dr John Burnett, principal of Edinburgh University, hands round the strawberry cream cakes at a special thank-you tea party for 100 Edinburgh landladies.

Two more London schools discuss merger option

by Peter Aspden

Talks are taking place between London University's School of Oriental and African Studies and the School of Slavonic and East European Studies with a view to closer collaboration and a possible future merger.

The two schools have felt particularly threatened by the financial cuts imposed on London University because of the highly specialized nature of their work.

A joint statement by the schools' directors, Professor Charles Cowan (SOAS) and Dr Michael Branch (SSEES), said the future collaboration would "facilitate the development of their work in the national interest at this time of financial pressures".

The terse wording of the statement, to which neither school wanted to add any comments, reflects the unease felt in many quarters over the shake-up of the university's schools and colleges.

So far, mergers between Royal Holloway and Bedford colleges, and King's, Queen Elizabeth and Chelsea colleges have gone ahead, though not without difficulties. Talks are also taking place between the new King's and Westfield College.

The SOAS/SSEES statement said the precise form of their future relationship will be the subject of further discussions.

The university's vice chancellor-elect, Lord Flowers, said this week that the pace of change in universities over the next four years would have to quicken, to cope with the "unprecedented degree of centralism in official and political thinking about higher education".

He told the London University parliamentary group that any reorganization of universities should be strengthening standards of teaching, research and scholarship.

sex-stereotyping which puts girls off studying such subjects.

The committee - in its last recommendations before being "stood down" - also advises the Government to set up a grant-aided team - including seconded teachers to mount a recruitment campaign, both nationally and locally, to draw more graduates into teaching.

The committee says that unless teacher recruitment is boosted, there will be a shortfall in the 1990s, when it is predicted that the secondary school pupil population will have started to rise.

machines, higher child benefit and improved educational provision at all levels and a wide range of other socially desirable facilities from a limited amount of revenue, it would be quite wrong to ignore criticisms on such a scale involving such substantial resources.

It is to be hoped, therefore, that the profession will not bury its head in the sand or adopt a Canute-like posture in the face of these criticisms but will help to put its house in order and to embark upon the market research and selling of courses advocated in the report. All the recommendations are, after all, being carried out already in a substantial number of colleges.

The contrast at times is quite vivid. If the suggested performance indicators on class size, staff/student ratios, average lecturer hours, retention rates, part-time staffing levels and average remissions are not rapidly taken on board it will not be long before the national agreements are also challenged. The more attention is focused on these areas the more likely that is going to happen anyway.

Ian Wrigglesworth

The author is Social Democratic MP for Stockton South.

Labour outlines plans for extending training

by Maggie Richards

A condemnation of Government policies on training and a promise of a new statutory framework for youth and adult training under a Labour administration, were outlined by Mr Harry Sheerman, Opposition spokesman on employment, in a Commons debate this week.

By abolishing industrial training boards, closing skill centres and presiding over a massive drop in apprenticeships, the Government had kicked away the pit props of the training system, he declared.

In its place the unemployed were being offered a palliative, an illusion of training opportunities costing half the price of the original system and based on a theory of responding purely to market forces.

In response, Mr Peter Morrison, employment minister, referred to the danger of a return to outdated training methods, leading to bankruptcy and redundancy.

Employers, who were the first to become aware of market demands and thus identify skill needs, had to remain the major training providers.

The Government then had an important role to play as a catalyst and pump-primer.

The chaos that had existed between industry and public providers of training was being plugged, but it was a slow process.

Mr Morrison highlighted some of the Government's major training programmes over the last five years - the Open Tech, the technical and vocational education initiative in schools, youth training programmes and the adult training strategy. Since 1979 spending on training had increased from £458 million to £1,234 million. Currently 643,000 people were undertaking training, compared to 353,000 five years ago.

Spelling out Labour's plans, Mr Sheerman said they were based on aiding personal and intellectual development. Education and training would provide the competence and skills to contribute to an active and effective democracy both at work and in the community.

Training had to be perceived as natural, useful and desirable for workers who needed to acquire many skills. That meant breaking the habit of using the school system to filter the academically bright.

A common core curriculum in schools including a technical element for all pupils would be linked to a coherent and comprehensive approach in the post-16 sector, with education maintenance allowances for children at 16.

Rights to education and training would embrace both those in study and on youth training schemes. Methods of learning would be linked to a modular, integrated system to enable entry and reentry to the system, combined with personal profiles of learning and achievement.

Liberal spokesman Mr David Penhaligon invited employers to spend money on training. Legislation ought to be used to ensure employers made a fair contribution towards the cost of training.

Charter guarantees places

by David Jobbins

All qualified 18-year-olds are guaranteed a place in higher education and payment of a living grant in the Labour Party's charter for young people.

Published yesterday, the charter is the latest in a series issued by the party to draw together an outline of future policies with an attack on Government failures.

A charter for pupils and parents has already been published and a charter for higher education is expected in the late autumn.

Sponsored by a variety of show business personalities, including Billy Bragg, George Melly, Tom Robinson, Ian Wandford, Madness and Rik Mayall, the charter commits Labour to offering more chances for young people to enter further and higher education at 18 and beyond.

Too many well-qualified 18-year-olds cannot get a university place while far too many 18 to 25-year-olds have been condemned to long-term unemployment, it alleges.

More full-time and part-time routes would be opened up to a wider group of students, through a proposed credit system. At 18 students would receive a recognized qualification in the form of a certificate or profile recording the number, type and level of credits obtained over the previous two years.

"It would be a further passport to jobs and further and higher education opportunities," the party says.

Labour adds that many school leavers cannot find a job or endure the

"patchy quality" of the Youth Training Scheme. "The real enemy within is youth unemployment," it accuses. The charter pledges the right to at least two years' education, training and work experience. Sixteen and 17-year-olds would have a right to a negotiated wage if employed, with paid release to college or at least 16 a week training allowance, or £27 a week in full-time study.

The charter also spurs housing, sport and leisure facilities, equal opportunities and disarmament.

Academies for Labour, the campaign to be launched by the party later this year, has received full backing from leaders of the Parliamentary Labour Party and the national executive.

College in bid to become European education centre

by Olga Wojtas

Scottish Correspondent

Staff at Dundee College of Education are seeking wider support throughout Scotland to turn their institution into the first European community college of education.

The move comes a week after the college was singled out in a report from the National Audit Office on surplus accommodation in education colleges. Dundee, which moved to new buildings for 1,800 students in 1975, has never had more than 700 college-based students, says the report, and currently has only 500.

But the local branch of the Association of Lecturers in Colleges of Education Scotland, backed by the other campus unions, says that as Scotland's most modern education college, Dundee has virtually all the facilities necessary to be a European centre.

Such a centre is vital because of the pressures of youth unemployment, the technological revolution in education, the need for careers guidance and vocational training, and discrepancies in provision in different countries.

Unless Scotland takes the initiative, a European education centre will be "by sheer inertia renounced in the vicinity of Brussels/Luxembourg or Strasbourg," says the ALCES document. Scotland could provide a more detached base from which to view and guide European educational developments.

"The Scottish tradition of preparing a disproportionate number of its people to take their place in societies other than their own and to depend on their education to help them in their careers must help to justify the choice of Scotland as the centre for European education."

Dundee staff are now seeking support from both the European Community and Council of Europe, as well as all Scottish political parties, trade unions and local authorities.

The principal of Dundee College, Dr W. A. Ilsey, also criticized the "inferences" drawn from the National Audit Office report by the media. In a graduation address, he said: "It is vexatious and frustrating that the sensationalists are not equally assiduous in broadcasting the contribution that this college makes to the national and international image of Scottish education."

The college, for example, had Manpower Service Commission funding to set up the Scottish Open Tech training and support unit, and was the development agency for the Scottish computer-assisted management programme.

Mr Peter McNaught, principal of Craigie College of Education, warned in a recent speech that in the present climate, any impairment of the education system could result in "the most radical destabilization of society this country has yet seen".

But he added that job prospects for teachers were improving, with the pool of unemployed teachers diminishing.

Prove you have industrial support, NAB tells colleges

Polytechnics and colleges awarded extra student places in the Government's "switch" programme for science and technology will have to prove their claims of support from industry before receiving their money.

The National Advisory Body secretariat has sent out a letter to all polytechnics and major colleges with engineering degree courses outlining the criteria by which switch places will be awarded.

The letter in effect asks institutions to tender for places by July 5, offering no financial guidelines on how places might be funded. It simply asks institutions to say how much money they would need for recurrent spending, buildings and equipment to take on extra students.

A central element of the exercise is the generation of tangible additional support from industry, the letter says. As examples of the form that support might take it suggests industrial help with equipment; money for accommodation or teaching staff including secondments or joint appointments

with industry; additional sponsorship of students; and academic/industrial collaboration in teaching, companies, training, research and consultancy.

"Clearly it will not be possible for institutions to generate these commitments in the short time available to develop proposals," the letter says. Instead the bids should indicate possibilities.

But when money is allocated it will be on a pro-rata basis. "Subsequent confirmation will depend on evidence of an explicit increase in related industrial support," the letter says.

A suitable interval (which might be about eight weeks) will be provided for this. Money will be available to fund first degree and postgraduate places, mainly in full-time and sandwich courses, for 1986/87 and 1987/88 in production, mechanical, general, electronic and software engineering and applied physics and materials science. The NAB will take advice on selection from the Council for National Academic Awards, HM Inspectorate, the Science and Engineering Research Council

and the Information Technology Skills Agency.

The criteria will be subject relevance to industrial needs, industrial support, and cost-effectiveness - hence the tendering system. Mostly students would be enrolled on existing courses, but some new ones might be developed. The amount of money available is not yet known, but would have to cover capital and recurrent expenditure.

The Department of Education and Science has announced the nine university research groups which will this year share an extra £4 million which is being provided to buy new equipment in support of research.

They are: Professor E. Ash, electronic and electrical engineering, University College, London - £439,000; Professor A. R. Battersby, organic chemistry, Cambridge - £472,000; Professor T. L. Blundell, protein engineering, Birkbeck College, London - £545,000; Professor W. J. Brannan, biochemistry, Leicester - £366,000; Professor A. Broers, engineering,

Cambridge - £463,000; Professor R. J. Donovan, physical chemistry, Edinburgh - £326,000; Professor A. R. Fersht, chemistry, Imperial College, London - £440,000; Sir Peter Hirsch, metallurgy, Oxford - £451,000; Professor R. Parsons, electrochemistry, Southampton - £403,000.

In addition, an interim grant of £95,000 will be made jointly to Professors M. D. Lilly and P. Dunnill, chemical and biochemical engineering, University College, London.

The Scottish Education Department has allocated the first £2.5 million of £14 million to increase the number of engineering and technology students in Scottish central institutions. There will be some 250 extra students and 50 additional staff in the coming session, with 85 students at Paisley College of Technology, 73 at Robert Gordon's Institute of Technology, 5 at Dundee College of Technology, and 35 at Napier College of Technology. Robert Gordon's has received the largest grant of just over £900,000.

Lessons in communication

Lessons in communication

Lessons in communication. The Audit Commission's assault on so-called inefficiency in further education will have heard Jim engaged in philosophical discussion with David Trieman, official of the National Association of Teachers in Further and Higher Education.

The Audit Commissioners were making value judgements, not stating facts, argued Trieman. What was the difference, asked JY. And so it went on. Nevertheless the discussion was heated enough to provoke 21 calls to the BBC. Nine of the callers were anti-Natlie, including four students trying to denounce their lecturers. Twelve were pro-Natlie. They included five lecturers' wives, and four actual lecturers who presumably caught the JY Prog during their (paid) tea-breaks.

A personal touch from higher education minister Mr Peter Brooke launching the Polytechnics Central Admissions System. Brooke on No. 2 would be testing the new system when he applied for polytechnic art and design courses next year, he said. Except that, as Mr Brooke's secretary informed, the new PCAS system does not take art and design applicants who will continue to use their own central register.

Keeping up the good work. Coventry (Lanchester) Polytechnic's directorate has just spent two days at Ashmore Hill College "to give its undivided attention to the future planning of the polytechnic" according to an internal newsletter.

After "extensive discussion of a wide range of relevant issues", the paper continues, they reached the following key conclusions:

● To maintain broadly the student population;

● Broadly to maintain the current profile of academic work.

This week sees the launch of a poster detailing all advanced higher education courses in south-east Scotland, covering Edinburgh, Stirling and Heriot-Watt universities, not to mention various colleges of art, technology and education. It has been produced by the august gathering of Principals of East of Scotland Tertiary Sector. Otherwise known as PESTS.

Sherrying a common interest. Among its draconian recommendations, the Jarraff Efficiency Inquiry called for stronger links between the University Grants Committee secretariat and the Committee of Vice Chancellors and Principals. A new era has begun with the implementation of this sherry party.



Brighton Polytechnic students paddle their concrete canoe, built as a civil engineering project using cement and glass spheres which are a waste product of coal-fired power stations. The canoe, demonstrated here by students Hugh Cunningham (front) and Ian Thomas, carried off two prizes at the Concrete Society's national competition at Thorpe Park, Surrey.

PARTY LINE

Warnings to be ignored at peril

I was very disappointed at the knee-jerk reaction of Peter Dawson and his colleagues from the National Association of Teachers in Further and Higher Education to the report of the Audit Commission on colleges of further education and polytechnics. Having read the 87-page report I am, if anything, surprised there was not an even bigger public reaction to its findings than we actually had. Even if only half of its critical findings were accurate there would be major cause for concern at the way in which resources are being used in our colleges.

To seek to brush the whole thing aside is both silly and dangerous. It is silly because the weight of evidence is so great that it simply cannot and will not be dismissed. It is dangerous because if the profession itself does not seek to overcome the criticisms and tries to defend malpractice and inefficiency, it will undermine its credibility and others will step in to take action that may be very unpalatable.

The report suggested that there are opportunities for improvements worth more than £50 million a year or around £300,000 per establishment examined. As they covered only one in three colleges they suggested this meant that there were potential savings in the order of £125 million to £150 million per annum.

annum or opportunities to provide places for at least 75,000 extra students with the same resources. It is no good attacking these figures as crude and unjustified. The point is that they identify a scale of savings that is very substantial indeed. As the report points out there are 500,000, or 16 per cent of 16 to 19-year-olds at present unemployed.

We should, therefore, be seeking to obtain the maximum possible use of our resources to cater for as many of these and others as we possibly can. If all colleges manage to reach just the median performance of those covered in the report 50,000 to 60,000 students. The number of full-time students in colleges increased by 80 per cent between 1972 and 1982 and the number of 16 to 18-year-old full-timers increased by 50 per cent between 1978 and 1982. But by 1994 the number of 16 to 19-year-olds will have dropped by one-third. As well as being in the

national interests, therefore, it is also in the lecturers' and colleges' own interests to seek to increase their student intake by the maximum number possible.

The thing which stands out from the report most clearly is the dreadful management of many colleges. Inevitably the position of lecturers comes under the microscope as they represent 52 per cent of the cost of running the colleges. Indeed, the cost of all staff represents 73 per cent of the total costs of colleges. Teacher productivity is clearly going to remain high on the agenda. When we read of the combined classes being counted as though they were separate, of dubious claims for substantial overtime payments when maximum class contact has not been met, of significant omissions or errors in 55 per cent of registers, of double counting of hours, of a disturbing number of small classes of eight students and being included in contact hours of many lecturers teaching well under

10 hours a week, in what should be an academic year of 36 weeks in which most do only 30 to 33 weeks and some 29 weeks as a routine - or even less - then inevitably substantial questions are going to be asked. When you add to this the criticisms and money lost on inadequate stock control, reimbursement of consultancy expenses, 17 per cent of colleges with more than a quarter of their students dropping out, and in one case the loss of £350,000 on rate support grant from the Government because of inadequate information being given by a college, you are left with the picture of a pretty frightful mess.

I am sure that some of the defects can be explained and justified but I find it inconceivable that all of them can. Bearing in mind the fact that a general increase in lecture hours by one per week is the equivalent of an additional 50,000 full-time students, that all governments and MPs are under constant pressure for more expenditure for kidney

machines, higher child benefit and improved educational provision at all levels and a wide range of other socially desirable facilities from a limited amount of revenue, it would be quite wrong to ignore criticisms on such a scale involving such substantial resources.

It is to be hoped, therefore, that the profession will not bury its head in the sand or adopt a Canute-like posture in the face of these criticisms but will help to put its house in order and to embark upon the market research and selling of courses advocated in the report. All the recommendations are, after all, being carried out already in a substantial number of colleges.

The contrast at times is quite vivid. If the suggested performance indicators on class size, staff/student ratios, average lecturer hours, retention rates, part-time staffing levels and average remissions are not rapidly taken on board it will not be long before the national agreements are also challenged. The more attention is focused on these areas the more likely that is going to happen anyway.

Ian Wrigglesworth

The author is Social Democratic MP for Stockton South.



Time for a different action plan

In Sir Keith Joseph's view of the present shortcomings and weaknesses in education, top of the list is the curriculum and second comes the examination system. Further on in the interview, reported in *The Observer* on June 16, he asserted that there was a need to maintain a wide range of options for the learner to as late a stage as possible.

Those three elements, the curriculum, the examination system and flexibility of choice are the cornerstones of the action plan for 16-18-year-olds which has brought Scotland so much Government approval. In the White Paper *Training for Jobs*, for example, Scotland escaped having any of its funding for non-advanced further education transferred to the Manpower Services Commission because it had put its house in order with the action plan.

The plan required the transformation of all course curricula into modules of 40 hours length, with occasional double modules and half modules. It also required that assessment should become formative, summative and internally controlled. So was to be created a completely flexible system with 16-plus year-olds having a choice of an open "menu" of some 1,700 modules and the assurance that every module completed in school or college would be given credit on the new Scottish National Certificate.

These principles have already been compromised, however, because for accreditation purposes (eg by City and Guilds) modules are being grouped in "permanent clusters" to form courses and in some cases, to satisfy employers' requirements, externally designed assignments and end-tests have been introduced.

What of the practical experience of the first year of operation? The Scottish Further and Higher Education Association has canvassed its branches and members throughout Scotland. During 1984/85 the pilot-which has been preceded by the plan has worked but simply because the professionalism of individual lecturers has made it work.

There has been a failure to brief staff fully, a failure to provide them with appropriate training, a failure to provide them with the time required to produce learning packages for the day-to-day operations. Some complaints of being swamped by the forms to be completed. Others complaint of having no time to guide and advise students.

From the experience of this year the association, with the other unions on the Scottish Joint Negotiating Committee, has demanded that the management must face its obligations: time for in-service training of staff—we have suggested ten days in a year; time for the development of learning packages—we have suggested that 48 hours per module is required; and time for day-to-day administrative and advisory work—we have suggested that two hours must be allowed within the maximum weekly contact hours.

Management's immediate response has not been encouraging and the association is presently conducting a ballot of its members with a view to the possibility of unilaterally imposing a reduction in contact time next session. So 1985/86 may be the year of a different kind of planned action!

Graham Allison

The author is general secretary of the Scottish Further and Higher Education Association.

Sacked lecturer refused senate inquiry

by Peter Aspdin

The senate at Warwick University has decided not to hold an inquiry into the sacking of Mr Barry Russell, a theatre studies lecturer, for sexually harassing a female student.

The motion calling for an independent inquiry, to be chaired by the university's vice-chancellor, Lord Scarman, was defeated by 20 votes to 10. This overturned a previous demand by a special assembly of academic staff for an investigation into the affair.

The senate considered a confidential document by the university's solicitors, Linklaters and Paines, which said the facts of Mr Russell's dismissal had

been widely misrepresented. Mr Russell was dismissed with three months' salary in lieu of notice when the university council upheld a complaint by one of his female students, that he had made "improper advances".

She claimed he had hugged her, made a sexual proposition which was turned down, and then left her. The council decided the incident warranted dismissal on "good cause" grounds, provided by section 28 of the university's statutes. It is the first time in the university's 21-year history that any member of the academic staff has been dismissed.

The senate said a memorandum by Professor Ralph Schwarzenberger supporting Mr Russell's appeal against his dismissal was a "gross distortion of the history of the case", which cast unwarranted doubts on the motives and impartiality of the complainants.

The solicitors' document also said that Professor Schwarzenberger, who had argued against the university's handling of the case, was seeking to "unfairly excite the sense of justice of members of the university" by the distribution of his memorandum.

It said the original complaints against Mr Russell included three lengthy memoranda from full-time mem-

bers of the academic staff, one of whom was the acting chair of view of the department. "It was in a committee to be set up to investigate these complaints; their nature made inevitable," said the document.

Mr Russell said this week that the senate vote showed quite clearly that the university was shying away from an independent inquiry into its handling of his sacking.

"They have decided to hold an internal investigation into their procedure so I have the consolation that this sort of thing will not happen to a member of the academic staff again."

Scots union attacks YTS 'banality'

The Manpower Services Commission should listen more attentively to experienced educationalists than to doctrinaire political theorists, according to Scottish further education staff.

The Further Education Lecturers' National Section of the Educational Institute of Scotland, responding to an MSC consultative paper on the Youth Training Scheme, says it is becoming increasingly difficult to discuss initiatives such as an extended YTS in terms of education and training.

This is because the Government's primary purpose is to disguise the true nature of unemployment, cut social security costs and attack wages and conditions.

"The aim to produce better qualified young entrants to the labour market is so banal as to be meaningless," the FELNS says. "The problem is that there are very few jobs, not insufficient qualified young people."

In Scotland, a quarter of YTS places are in the retail sector, the FELNS says, but a combination of new technology and national insurance regulations are leading to more part-time jobs. "Perhaps the MSC will update Napoleon and we'll consist of a nation of qualified (but unemployed) shopkeepers, shelf packers and check-out zombies."

It is crucial that if the YTS is to be extended to two years, the second year should not simply be tacked on to the existing scheme, the FELNS says.

Restructuring the YTS offers the MSC an ideal opportunity to return to the original concept of 20 weeks off-the-job learning annually: the first year of the scheme should be broad-based, with the second more specifically tailored towards a particular occupation.

But while a two-year course will be relatively easy to provide in craft areas where two or more years' training is traditional, it will be extremely difficult to obtain the correct balance for the majority of young people entering the retail or clerical fields, and they may have to have a more general education.

The first formal entry to the scheme should be in 1986, with any arrangements for the coming session on a pilot basis only, the FELNS recommends.

It adds that there should be an "active difference" between the normal level of supplementary benefit and the YTS allowance. A graduated increase in the second year might well be an incentive to young people to complete the full course.

London agrees to set up centre on ageing

by Felicity Jones

Agreement in principle has been reached on establishing an Institute of Gerontology at King's College, University of London.

The centre on ageing will be called the Age Concern Institute of Gerontology to reflect a partnership between the charity and the university and will be located from the autumn at one of the college's sites, probably Chelsea College.

The new institute will mainly use the existing research resources of Age Concern (England) which has for some time been researching the social and economic processes of ageing and the policy issues which relate to older people.

The university will provide the teaching and research resources, making the institute a joint venture.

ing particular use of the college's medical faculty and also drawing upon its facilities in biochemistry, nursing, nutrition and general practice.

Mr Jonathan Barker, head of Age Concern's research unit, said: "There are obvious advantages for us in being in London and the changes at King's meant that they were looking for new ways in which to use their resources."

"We hope next year to attract sufficient core money to have endowed university posts in ageing in a variety of disciplines and additional new money to launch research projects."

A lecturer in biblical studies who has studied the images of older people in the Old Testament is one member of college staff who might be brought into the centre.

The Health Minister Mr Kenneth Clarke has already given his support.

The institute will be looking for Government funds. A master's and up as soon as 1986.

The college's academic board and the executive committee of Age Concern have agreed to the institute but the decision has still to be ratified by the governing bodies next month.

Links with London University's extramural department and the Polytechnic of North London where academics interested in ageing are based will also be sought. Tentative London School of Economics which could offer expertise in economics and social administration.

A symposium of the combined staff is to be held in September and there will be a series of public lectures while the new institute is finding its feet.

Redundancy call carries veiled threat

by Carmel McQuaid

The vice-chancellor of Queen's University, Belfast, Sir Peter Froggatt, has renewed his appeal for volunteers for redundancy with a veiled threat of court action to achieve the necessary staff losses.

Sir Peter wants volunteers under Government-sponsored premature retirement compensation scheme, which ends on September 30 after three years. But he also took the opportunity to point out that universities no longer shy away from protracted court proceedings to effect redundancies.

Staff losses at Queen's are reported to be too slow, amounting to 30 per cent of the average take-up elsewhere in the United Kingdom. Leeds, for example, has 17 vacant chairs while Keele has lost all but one arts professor.

Further staff reductions at Queen's are required to accommodate the decline in income—projected at 1 to 3 per cent between 1986 and 1990—particularly in the arts faculty which is changing from a four to a three-year honours degree course. The university plans to create its own compensatory scheme where anyone willing to leave on approach the vice-chancellor will negotiate a package.

Until now, Queen's has escaped the brunt of the cuts, since the decision to cut the arts and science honours degree courses from four years to three was only made earlier this year. This has meant that staffing levels remained undisturbed, but the university is now aiming for a staff:student ratio of 1:12.

This year, there were 36 applications for the scheme and of these, seven were granted, 15 were reemployed part-time and a further seven refused on the grounds that their departure would not serve the managerial interest. Of the 19 who applied for unemployment severance, five applications were considered to be not in the managerial interest, five were granted and one withdrew.

The parliamentary move overrules a decision by the health ministers' conference according to which the exam had been set correctly both in form and content. Three regions, however, (Bavaria, Lower Saxony and North Rhine Westphalia) had insisted on an investigation and initiated the Bundesrat ruling.

According to the parliament's decision, the commission is to submit its findings by the end of July. Health Minister Heiner Gieseler has confirmed that the results would be revised in case the commission proved that the questions were not set correctly.

So far the Mainz Institute responsible for setting the nationwide medical exams has refused to disclose details about the failed candidates. However, it has been reported that a high percentage of them were students who had taken the test for the second or third time. A proposal to allow only those who had failed for the third consecutive time to resit the exam has been rejected by the Association of German Students (VDS).

In another decision the Bundesrat has ruled that the present multiple choice system should be complemented by oral exams at the universities.

New degrees
The University Pertanian Malaysia in Kuala Lumpur is introducing three new degrees at the start of the academic year next month to help overcome the country's shortage of engineers and accountants. A new Bachelor of Accountancy course will take 30 students a year while two Bachelor of Engineering courses, one in electronics and computers and the other in mechanical systems, will take 40 each.

US squeezes apartheid purse

from William Norris

WASHINGTON

When the University of Minnesota board of regents decided last week that they would not divest themselves of \$31.5 million of investments in companies doing business in South Africa, they found their table instantly surrounded by 30 shouting protesters. The regents hurriedly passed a second motion to invest no more in such companies, and to reduce the university's holdings in firms not opposing apartheid, but the vote went unnoticed in the uproar.

There was no such weakening at Berkeley, however, where the regents of the University of California voted down a proposal that they should sell all such investments if the South African government did not dismantle the apartheid system within two years. They decided instead to appoint a committee to review their shareholdings, case by case. There were cries of "shame" and a warning of facsimile "pass books" from the back of the hall. In the ensuing demonstrations on campus, 60 people were arrested.

The incidents were typical of the crisis of conscience which is beginning to smite universities over the length and breadth of America. Assailed by student protests on the one hand and by the cautious voices of their financial advisers on the other, a growing number of colleges are beginning to back away from investments in such companies which amount, in total, to billions of dollars.

So far few universities have divested themselves totally of their holdings in South African-orientated companies. The most notable examples are the universities of Michigan State and Wisconsin, and the City University of New York. Some have decided that the most positive approach is to maintain their investments, but to bring pressure on the companies concerned to liberalize their practices within South Africa. Others—more than 120 at the last count—are trying to give direct assistance to South African blacks by sponsoring scholarships for them at American universities. About 400 such scholarships are now available.

The most commonly adopted policy, however, has been selective divestiture, based on the guideline of whether or not individual companies adhere to the so-called "Sullivan Principles". These lay down, among other things, that companies should strive for recognition of basic human rights, including collective bargaining, maintenance of a viable living standard for their employees; the non-segregation of facilities; equal and fair employment practices; equal pay for equal work; and an increase in the number of qualified blacks and non-whites in management and supervisory positions.

This has led Brown University, Rhode Island, to sell \$4.6 million worth of stock in six companies, and Dartmouth College to divest itself of several corporations—including the Republic Bank of Dallas, because it

continues to lend money to the South African government. Harvard, Yale, Illinois and Stanford are among the major universities to follow suit. The process has not always been painful. The City University of New York, after making a total divestment of its \$8 million holding in nine companies doing business in South Africa, discovered that it had made a profit of \$709,000 on the deal. Others have not been so lucky. Wisconsin University made an initial loss of \$500,000 when it sold \$10 million worth of stock. And some have struck unexpected problems. When the state board of higher education in Oregon, which controls the state's eight colleges and universities, decided to divest the system of its holdings in 27 companies, it ran into a legal roadblock. The Oregon attorney-general ruled that only the state's investment council could make such a decision.

But the highest prize in the anti-apartheid campaign would have been the vastly wealthy University of California. Of the \$6.3 billion investment portfolio controlled by the university, some \$2.4 billion are tied up in companies which do business in South Africa.

When the vote was finally taken last week, university president David Gardner said: "I am simply not persuaded that the selling of UC-held stocks and bonds of companies doing business in South Africa would accomplish much more than a change of ownership of the shares to be sold. It would surely not end apartheid."

Commission inquires into medical exam

from Barbara von Ow

MUNICH

The West German regional parliament has decided that an independent expert commission should look into the disastrous results of the last medical preliminary exam in March which 42 per cent of all candidates failed.

The decision by the Committee for Youth, Family and Health in the Bundesrat follows widespread protests and strikes by Germany's medical students. Several youth organizations have alleged that the results had been officially rigged to stem the growing glut of doctors.

The parliamentary move overrules a decision by the health ministers' conference according to which the exam had been set correctly both in form and content. Three regions, however, (Bavaria, Lower Saxony and North Rhine Westphalia) had insisted on an investigation and initiated the Bundesrat ruling.

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Nationalism row prevents academic exchange

from Christine Tausig

QUEBEC

A standard academic exchange has turned sour amid charges of nationalism over 10 permanent residents.

Robin Matthews, professor of English at Ottawa's Carleton University, and Bruce Nesbitt, a colleague at Simon Fraser University in Vancouver, British Columbia, were planning to swap jobs for a year.

In a surprise move, however, the exchange was vetoed by fellow professors at SFU's English department. Professor Matthews, an ardent nationalist who has often attacked nationalists across the country for hiring non-Canadian teachers, is a "potentially divisive personality", according to Simon Fraser's department chairman Jerald Zaflove.

Almost two thirds of SFU's English department voted against the exchange. Exchanges usually proceed with a "tacit understanding" said Matthews. In fact, most Canadian universities actively encourage such job trades because they are unable to hire many new staff.

Professor Matthews, who like Professor Nesbitt is a Canadian literature specialist, was not welcome at SFU because of his "aggressive anti-Americanism", stated the department chairman. "Professor Matthews' ideological position is narrow, fundamentalist and fanatical. We felt he would not enhance the teaching and research of our department." In the past Professor Matthews had often criticized Simon

Fraser's English department as being controlled by Americans.

Twenty-seven of the SFU faculty are native born or naturalized Canadians; another 10 are permanent residents. Professor Matthews, who would give preference for teaching jobs to Canadian citizens over both naturalized Canadians and permanent residents, is "discriminatory and undemocratic", stated Professor Zaflove, who has been a permanent resident in Canada for 20 years.

Professor Matthews, on the other hand, called the SFU reaction "rather strange". He stated that he had been turned down on the basis of his ideas and not, as Simon Fraser claimed, because of his personality.

The veto, according to Professor Matthews, violates both academic freedom and human rights. "I am told it was clearly a case of American hostility to me" charged Professor Matthews.

Professor Matthews has taken his complaint to the Canadian Association of University Teachers for adjudication, calling for a "public rejection" of Simon Fraser's stand. Universities must not be allowed to exclude "a perfectly credible scholar just because they don't like what he says", he stressed.

Professor Matthews also denied charges that he is anti-American. At a recent press conference, the minister of science and higher education, Bonon Miskiewicz, tried to allay fears by suggesting that universities would, after all retain the right to elect their rectors, pro-rectors, deans and pro-deans. This at first sight represents a considerable climb-down by the government, but the benefit to the universities is more apparent than real.

For Miskiewicz went on to say, the voters would now be not electoral colleges representing the whole university community, but the university senates, which would, under the reform, have a membership heavily weighted by senior tenured professors, without

Donald Fields meets the director of the UNU's new institute

Defusing the north south dialogue

The WIDER Institute new arm of the United Nations University, has started work in one of the new grandiose slabs that clog the heart of Helsinki. In spacious, functional premises its board has approved a budget for 1986/87 of \$4,845,000. Its chairman Dr Saburo Okita, a former Japanese foreign minister, has outlined the main research themes while Mr Soedjatmoko, rector of the UN University, has stressed how these will be designed to attack persistent international poverty.

The hierarchy stands for World Institute for Development Economics Research. Like the university in Tokyo WIDER is financed from interest accruing in an endowment fund, thereby guaranteeing autonomy and academic freedom. Finland has pledged \$25 million dollars to the fund and granted \$5 million in start-up money. The target is to have 15 to 20 top researchers in Helsinki.

WIDER's director is Dr Lal Jayawardena, who took a double first at Cambridge before serving in ambassadorial and other capacities for Sri Lanka, with a heavy emphasis on monetary systems and the North-South dialogue.

Dr Jayawardena defined his approach in terms of "policy-oriented research in a number of areas which are not being adequately addressed". These include hunger and poverty; the new breed of Bretton Woods system, which has allowed the World Bank to discipline least developed countries; and an attempt to synthesize northern paradigms, shaped by classical market forces, with southern ones, rooted in a feeling that all the dice are loaded against you.

"Our work should clarify why countries are unable to coordinate their policies to prevent the world lurching towards inflation, deflation and stagnation," said Dr Jayawardena. "We must get northern and southern currents to converge despite their differing intellectual rigours, to overcome the way in which academics inhabit different worlds."

The director believes it is important to defuse North-South dialogue—or clash—of politics and rhetoric, to hit towards a proper mix between market forces and planning. At present, he says, the north tends to berate the south for "not getting things right" and therefore failing to develop while the south is dismayed by the northern fad for market mechanisms.

But will governments be prepared to heed WIDER's advice? Dr Jayawardena believes they will, provided the institute's work is of high quality. He is anxious to liaise with experts in developing countries, including those that have collided with the International Monetary Fund. He is welcoming visiting scholars, and throwing the



Dr Jayawardena: philosophical

library open to local researchers. He has initiated a working relationship with the Finnish Academy and universities, and the Helsinki-based Nordic Investment Bank.

Pondering possible academic disputes within WIDER, Dr Jayawardena says: "Economics is not a homogeneous thing, but I hope that people with different viewpoints can work harmoniously, and that personal frictions will not get in the way. If we have good enough people, and work with those who have an established research base elsewhere, there should be no problems."

Dr Jayawardena's own philosophical stance has been partly moulded by his advisory work for the Brandt Commission. He is disappointed that governments have not wholeheartedly adopted the commission's ideas, though there have been attempts to implement parts of its report. Some encouragement is to be drawn from the way the World Development Fund is acting as a vehicle for transfers between developing countries, and from Brandt's impact on public opinion, notably that in Britain.

To those who take a sceptical view about the usefulness of development assistance, Dr Jayawardena refers to the evaluation of IDA (International Development Agency) that aid has been a positive influence. The impression that development programmes can be financed without foreign aid has gathered ground partly because of technicalities in national accounting, revealing balance of payment deficits among recipient countries.

The Asian and African countries to which IDA research will be targeted embrace enormous contrasts in culture and tradition.

Altogether, the third world has much to gain from the cross-fertilization of ideas that WIDER can generate. As the UN University works on the establishment of a second in-house research and training centre—INRA, the Institute for Natural Resources in Africa, to be based in a Francophone West African state—what Dr Jayawardena calls "alternative packages that professionals would find credible" will gain a place in the sun.

Deaf colleges under threat

America's two colleges for the deaf—Gallaudet College in Washington DC and the National Technical Institute for the Deaf in Rochester, New York—are under threat. At \$50 million a year, it is being alleged by some members of Congress that they cost too much.

It has taken Congress some time to get round to looking at the two schools, both of which are federally funded. Gallaudet, with 2,600 students, was founded in 1857, and NTID, which has an enrolment of 1,378, in 1965. Last week's hearing of the Senate handicapped subcommittee was the first to examine their affairs.

The subcommittee was told that it costs \$20,000 a year to keep a student at the special schools, whereas a university of California programme for deaf students was costing \$6,500.



Dr Tony O'Reilly: donation

Heinz meanz dollars for Irish chair

It was not so much the \$7 varieties as \$200,000 which saved the chair of Australian history at University College, Dublin.

For last week, Australians learned that the president and chief executive of the H. J. Heinz company of Pittsburgh, Dr Tony O'Reilly, had donated the sum he had earned from soup to reprieve the post.

Together with \$200,000 from the Australian government, the Irish university chair now has an endowment which should ensure its continuity. There had been doubts whether this year whether money would be found to keep the position going.

It had been established by the former Labor prime minister, Mr Gough Whitlam, with the intention of improving cultural and academic relations between Australia and Ireland and was the first of its type in Europe.

Dr O'Reilly, a former rugby international, director of the Exxon oil company and the Irish Independent newspaper, is married to an Australian. The Dublin chair will be known as the Keith Cameron chair, after Mrs O'Reilly's father who died in 1967. He was a noted mining magnate in Australia.

Italian PhD rules criticized

by Paul Flather

Italian academics have hit out at new rules which mean that PhDs taken overseas will not be officially recognized when university appointments are made. The PhD programme has been introduced only very recently in Italy and now the education ministry has decreed that all university appointments which are made via national selection committees or "concours" will only take note of Italian-based PhDs.

Italian academics fear that this will either discourage their graduates from going overseas to do valuable research, or force those already with foreign PhDs to seek jobs abroad thus adding to the growing "brain drain" from the country.

Professor Umberto Eco, the novelist, who teaches at the University of Bologna, said the move would create a "haemorrhage", likening it to a war which results in "the death of the youth of a whole generation".

A doctorate obtained for example in Oxford is for us worthless. But by brilliant they will take him even if he has completed his doctorate in Italy," he wrote in a recent magazine column.

He said the decision was nothing short of "grotesque". He foresees a time when candidates with overseas PhDs who do want Italian academic jobs come back to take a second PhD in Italy. This second and "useless" qualification will naturally deprive other worthy candidates from even



Professor Eco: "grotesque" decision

one shot at the doctorate, he writes. Italy was a very late starter in the PhD stakes and even now Italian PhDs are a rare commodity. In semiotics, Professor Eco's subject, he remains the only one with a PhD even though he reckons there may be up to 100 worthy candidates in the country and at least 30 strong candidates. In fact just three places will be allocated this year.

In psychology so far only 10 have been awarded, and each place was allocated only after severe competition. Professor Bruno Bauer, a psychologist from the University of Milan noted how the competition was very important now that all new professors would be drawn from PhD

holders. "Of course it is good that Italy now has PhD programmes. But it must be extended and it should recognize all PhDs," he said.

Until the last five to ten years the main argument used against PhDs was always that it would somehow favour only the well off students because they alone could afford to take an extra three or more years for study. But under increasing pressure the Italian authorities conceded that PhDs were important "in all civilized countries" and unlike the BA they allowed graduates to undertake more in-depth study.

But Italian academics are still concerned about the system of "rotations" which currently governs the PhD programme. The education ministry allocates few doctorate places because of lack of funds. But in an effort to ensure fair play it "rotates" the places from university to university.

As Professor Eco points out, this means that as soon as one university has established a good PhD course, it will have to yield those places to another institution probably less qualified - at least until it too builds up its programme and the next "rotation" takes place.

Italian academics like Professor Eco and Professor Bauer feel the current system makes them a laughing stock among their foreign counterparts. Many feel that the root of the problem is that it is the administrators and not the universities who make the decisions and they simply do not realize what a doctorate is really for.

Value of degree still holds

from Geoff Maslen

MELBOURNE

A degree in Australia still ensures a holder better than average earnings although the margin is narrowing according to a national survey.

The survey, conducted by a member of Sydney University's careers and appointment service, traced the five year employment history of more than 4,000 graduates from six Australian universities in 1979.

According to the results, unemployment was not an issue as far as university graduates were concerned. Five years after graduation only a very small proportion of graduates were still without jobs and looking for one.

The salaries of all surveyed averaged 21 per cent higher than Australia's average weekly earnings, with graduates of medicine (almost Aus\$35,000) and dentistry (Aus\$33,000) heading the list.

These two top-earning professions were followed by law (Aus\$27,000) geology (Aus\$27,000) and engineering (Aus\$26,000). Even graduates on relatively low salaries such as those in pharmacy (Aus\$21,000), architecture and town planning (Aus\$21,500) and biological sciences (Aus\$23,000) were still doing well compared with the less well-educated population.

But the survey did find that all graduates appeared to be suffering a decline in earnings compared with the average weekly wage, with those in law and medicine most affected.

Despite the decline, however, the results do show that graduates still have a considerable advantage in the Australian labour market where the general unemployment rate continues to be around 8 per cent.

The survey also revealed that more than 30 per cent of those questioned were employed directly by the federal state or local governments and a further 27 per cent were in the education sector; well over half the graduates, in other words, were members of one branch or other of the public service.

In almost every case, too, the salaries of female graduates were lower than those of males, even in areas such as teaching where wages are rigidly controlled.

Karen Gold reports on the daunting task facing the Nuffield modern languages inquiry

Few takers for a rich menu

Received wisdom on modern languages in Britain, from the Department of Education and Science downwards, is that a few linguist-diplomats are outstanding and the rest of the population shouts at foreigners in English.

In fact, substantial numbers of people study languages beyond school: 20,000 do university degrees; 8,000 do public sector degrees; 11,000 do various sub-degree qualifications, many of them secretarial.

The Nuffield inquiry into modern languages in further and higher education was established in April last year and is chaired by Miss Sheila Browne, the principal of Newnham College, Cambridge. The inquiry is to look at modern languages provision, particularly at competence; to consider the appropriateness of teaching methods, qualifications and their use of employment; and to advise on future developments.

That advice will come as modern languages face a series of assaults. The Government's Green Paper on higher education makes no mention of languages, other than to deplore the extra cost of

some four-year courses. The University Grants Committee is engaged in an exercise considering the viability of small departments, which category includes much modern languages provision.

In the public sector, where modern language student numbers grew by almost 30 per cent between 1980 and 1983 compared with a 4 per cent fall in universities over that period, the National Advisory Body has proposed a 20 per cent cut in subject categories which include languages. In schools, where all languages but French are declining fast, the new General Certificate of Secondary Education is not to include a compulsory modern language to qualify for its "merit" award.

Modern language graduates have had high, though not the highest, rates of unemployment in the past. Many go into teaching, almost invariably into secondary schools where pupil numbers are falling and recruitment is down. In the next 15 months, if it is to argue the case even for sustaining anything like current language provision, the Nuffield inquiry will have to define a role for modern languages in Britain in the 1990s.



Miss Browne: will advise on future developments

there are 468 German and economics students; more than six times as many as the 74 reading German and philosophy.

But these alternatives pale into insignificance when compared with the startling strength of French. Everyone expected French to predominate; no one realized just how much it would. Almost twice as many university students study French as study German, the next largest language; 13,734 in French compared with 7,629 in German. More than twice as many students reading a single language do French as German.

Once past German the numbers drop sharply: 3,174 doing Spanish in universities (less than a quarter of French students); 2,011 in Italian; 1,719 doing Russian; fewer than 700 altogether in Arabic, Japanese and Chinese. The pattern is more marked still in the public sector: three quarters of colleges of higher education offering language degrees only offer French.

The general picture of university courses as literature-based and public sector courses as language-based is only partly borne out. Certainly literature has an astonishing grip on the universities: over 90 per cent of their language courses have compulsory literature study. Under 20 per cent of public sector courses have compulsory literature.

But Nuffield researchers point to several mitigating factors: the growth in university language centres; the emphasis on modern literature; the demand for literature teaching in schools at A level; and the need where medieval literature is compulsory to take account of the literary history of the language.

One of the reasons for the dominance of French in higher education is likely to be the decline of other languages in schools, particularly at A level. So Nuffield has looked at the *ab initio* provision on languages to see if this is being reversed. All exotic languages are always taught *ab initio*.

French is only taught *ab initio* in universities as part of a course with another language or subject, and then rarely. Most students begin Italian and Russian at university. German and Spanish are somewhere in between.

The final factor, without which no profile of language students would be complete, is their sex. Language stu-

dents are nearly all women. On some courses they are all women. The average percentage of women in French language and studies courses in universities is 80 per cent. (And some places have a lower percentage than that, so some have more.)

In other languages it is lower but rising: 63 per cent in Russian and 61 per cent in Chinese in 1983/84 compared with 59 per cent and 53 per cent in 1980/81. In 1983/84 the overall percentage of women in university and public sector higher education combined was 44 per cent.

The inquiry's first consultation paper will go out to all language departments in July. It will give these findings and ask what language teachers should do about the way students are voting with their feet. The inquiry has virtually completed one survey: on teacher training in languages.

There are three more to come. In the autumn 5,000 16-19-year-olds in sixth forms and colleges will be asked to answer questionnaires.

There will be two more surveys. One of undergraduates will ask what their expectations were in doing languages, to what extent these were met, and to what extent they affected employment prospects. The other, to graduates and employers, will ask if language courses have met their respective needs. A final consultation paper asking language departments for their responses will go out before the report is written.

Already the factual discoveries of Part I show what issues that consultation and the report will have to address. First there is the question of demand: what do students and employers want?

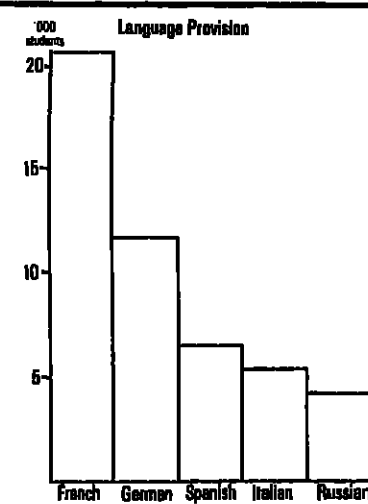
Second, and no less important, is the question of quality. Miss Browne would like to use a national test to discover what language competence (and what variation in it) is expected of final year students.

But quality also relates to size, and to all those courses with no students. Can institutions teaching 50 language students expect to provide the same quality as those teaching 1,000? Is it sensible for a university to have just six or eight French students as two currently do? How rigorous can reintroduced courses be when they may not have run for several years?

A national test might also make it possible to relate performance to particular factors: the amount of teaching in the language; the year abroad - compulsory in some places, optional in others - and *ab initio* teaching, which some claim can bring students up to the same standard as their A-level holding peers in six terms.

If that is true, then what value do A level students get from two thirds of their degree courses? Does that justify the move towards language-plus courses? Should language degrees be expanded to produce more competent linguists, or could that be done better in schools and further education? What is competence in a language anyway?

Coldbloodedly, says Miss Browne, one could say the country does not need either succinctly or economically the range and diversity of language courses offered in higher education; at the same time it also doesn't exploit almost half of them. So who wants them and what do we teach them for?



French with only a French O level.

There are substantial numbers with single language degrees - generally thought to be less able students - and with lower second degrees, although this may be because of lower achievement in literature, which will not affect their language teaching.

The trainers themselves are not altogether happy with what their students can do. Half thought their students' pronunciation, oral fluency and vocabulary was only "satisfactory" or "weak", with the other half thinking it was "good". Less than half thought their students' written grammar was good; not one was considered "good" at phonetics.

The other important weakness was in knowledge of the country's literature, history and culture, where almost all trainers were only "satisfactory" or "weak". This is a telling point. One university department has stated that knowledge of contemporary culture and institutions was not necessary if a student was only teaching to O level. In the pilot survey among 16-19-year-olds numerous youngsters said they were put off going on with languages beyond O level because they were never taught anything about the countries where they were spoken.

Almost half the modern languages courses offered to university applicants in a single year attract no students at all. That is the strongest indicator discovered by the Nuffield inquiry that no one really knows what is happening in modern languages.

In theory, the facts are straightforward. In 1983/84 there were almost 15,000 students studying modern languages in some form at degree level on around 2,500 courses in 55 universities. Around 7,700 students were studying modern languages at degree level on 107 degree courses in 50 polytechnics and colleges.

They had a cornucopia of choice: 44 different languages; endless subject combinations as diverse as Italian and film studies, Russian and classical studies, modern Greek and computer studies, English and French/German law, mechanical engineering with Russian. There were 2,612 combinations in the universities alone.

Breaking into the closed circle

and experience of the country whose language would be taught, and much less to written proficiency, knowledge of literature or linguistics, the referee's report, or experience with children.

But in almost every one of the 18 factors trainers were asked to consider, one would give an extremely low level of importance, a 0 or 1 out of 4, and another would give a high level, a 3 or 4. One institution thinks written proficiency worth a 4; another that it is worth 0. One university thinks undergraduate study of the same university is worth a 4; most give it a 0.

The picture of the trainers' abilities also varied widely. In some cases they seem underqualified; at least 34 trainers are offering to teach at a language at subsidiary level in which they themselves only have an A level, and one is offering to teach

The lure of the Orient

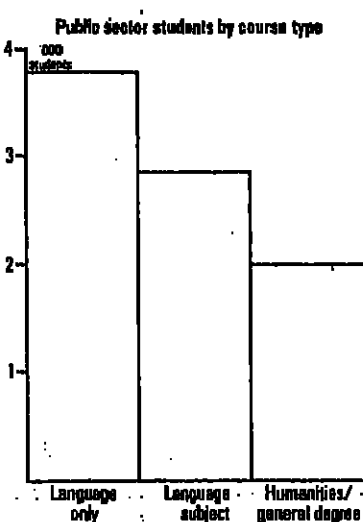
Between 1980 and 1983 the number of students studying Chinese at British universities rose by 69 per cent, and those studying Japanese rose by 60 per cent. This compared with an overall decline in university language study of around 4 per cent in that period.

Those findings are at the heart of the first of a set of "language profiles" eventually to be included in the Nuffield report: a picture of provision in each main language. The Chinese/Japanese profile shows these languages are taught at eight universities, one polytechnic and one college; at main and subsidiary level; in single subject degrees and combinations with other subjects.

All the single subject degrees involve study abroad; most are traditional courses including compulsory litera-

ture; all are taught *ab initio*. A total of 326 people study Chinese, 130 Japanese. There are also almost 100 students doing the languages at subsidiary level, possibly just to taste an exotic language.

The questions still to be answered on these two languages include who teaches them (native speakers or not); in what language they are taught; what use students make of them after graduating; how numbers might go up or down in future, and what other uses Chinese and Japanese graduates might be. For example, the profile suggests, Britain's trade balance with China and Japan is worth a look. Combined exports and imports with the two countries are almost half Britain's annual trade with France. There are 430 students of Chinese and Japanese - and over 20,000 students of French.



'Industrial elite' courses launched

from David Dickson

PARIS

Eighteen French universities have been selected by the minister of national education, M. Jean-Pierre Chevènement, as the first to offer three-year, professionally-orientated courses leading to a new high-level *maîtrise* undergraduate degree from the beginning of the next academic year.

Each of the new courses will offer an intense programme of both theoretical and practical work - including periods spent in private industry or government laboratories, a system which is still almost unknown in French universities although widely practised elsewhere in Europe.

The intention is to allow universities to provide a form of elite, professional training to a small number of highly-motivated students comparable to that which is already provided by the *grandes écoles*. The government has already agreed that extra money will be made available for staff and which it has approved.

Students on the courses will be chosen from those who have successfully passed the diploma which all second year of study to show that they have successfully completed the "first cycle". Each university will be free to decide how this selection should take place, for example whether it will be new examination, or whether they will be judged purely on their diploma

being offered, leading to a total of 720 places in the first year, while over 50,000 students take the "first cycle" diploma each year.

In allocating the first 18 courses, care has been taken by the minister to provide a balance both between different academic disciplines and between universities in different parts of France. Emphasis has also been placed on those subjects which are expected to make a direct or indirect contribution of the nation's economic performance. No courses have been approved in the arts and humanities.

Eight of the courses will be in science and engineering, including two in mathematics and systems analysis, physics and the life sciences. Four of these will be given by different universities in Paris (in two cases jointly with *écoles normales supérieures*) and four in provincial universities, including physics at the University of Nice.

There will be four courses in the social sciences, three of which have a strong emphasis on France's relationships with its trading partners, such as the course on foreign relations at the University of Paris and one on Western Cultures at the University of Aix-Marseille.

In addition, two courses on law and local management have been approved, two in economics and two in business studies, in each case one of the courses being offered by a Paris university, and the other by a provincial university.

According to ministry officials, over 80 different courses were proposed by universities after M Chevènement had announced his intention last month to introduce the new degree, which will

be recognized as a national qualification. The number of courses receiving approval has been limited primarily by financial constraints, and the ministry of national education is hoping that a similar number of new courses can be given the go-ahead to start in October 1986.

According to Mr Roger-Gérard Schwartzberg, the secretary of state for universities in the ministry, the links which will be established in each of the approved courses between the university involved and the world of economic affairs will result in a "label of high quality" being attached to the degrees awarded to successful candidates.

He added that the speed with approval of the new degree courses had been carried out illustrated the government's desire to see the development of an intellectually demanding policy pursuing high academic standards in the higher education sector, and to generate "a better linkage between the training provided by universities and the world of work".

It is also hoped that the prestige attached to the new courses as a result of their highly-selective intake will have a broader effect in encouraging greater competition between universities for good students, one of the main recommendations made in a report prepared earlier this year by the College de France.

In addition, in several cases - such as the new course in economics being offered by the University of Paris - the aim is explicitly "to fill a gap which currently exists between traditional forms of university education and that which is offered by the specialist *grandes écoles*".

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Price to pay for waste disposal?

David Jobbins on college efficiency and the Audit commission report

After the immediate storm precipitated by this month's Audit Commission report on the state of higher education, the repercussions will go far beyond the war of words over class contact hours, timing of tea breaks and allegations of fiddling.

The report's timing could hardly be worse for the college lecturers' union, which is in its third month of industrial action in an effort to reverse the trend of continued salary erosion and disrupted relationships with other professional workers.

Ironically, the seeds of a solution were being sown almost simultaneously with the report's publication. With previously Tory-dominated Association of County Councils, the chances of breakthrough in the Burnham further education committee along the lines suggested by Mr John Pearson, its Labour chair, increased immeasurably.

But leaders of the National Association of Teachers in Further and Higher Education accept, and have recognized from the outset, that the local authorities, financially weakened by cash limits buttressed with rate-capping and penalties, simply haven't got the money to begin the process.

Central to any solution will be an approach to Sir Keith Joseph the Secretary of State for Education and Science for a substantial injection of public money, probably in 1986.

Whatever the inclination within the department, ministers will have substantial difficulty in persuading their Cabinet colleagues and the Treasury to meet the bill in the face of authoritative evidence of inefficiency and underused capacity.

Even if, as Mr Peter Dawson, National general secretary, argues, the report is seriously flawed, its tales of near-criminal corruption and description of an enviable idleness working year will seriously damage the public esteem and be virtually impossible to dislodge from the minds of

Conservative backbenchers and the wider public.

At national level, Sir Keith will presumably wish to challenge many of the report's arguments on the growth in volume of work in the light of the report. But the union's problems will not be confined to national level. Already there have been signs of local authorities raising issues on the basis of earlier drafts of the report particularly on the increased proportion of part-time teaching hours.

Class contact hours have figured centrally in a number of bitter disputes with individual authorities and officials fear these will increase in number as a direct result of the emergence of the report.

When these disputes have been isolated, Natfhe has been able to handle them. But a rash of attempts to increase class contact hours - or pressure for them to feature in national pay negotiations - will be a different story.

The commission based its findings on investigations by auditors at 165 polytechnics and colleges in England and Wales. It maintains its sample, 550, is representative both in terms of geography and size and type of institution. The controller, Mr John Banham says: "We have been very careful not to generalize from the 165 colleges data on which we have reliable national data on which we can build."

Mr David Trisman, Natfhe's negotiating secretary, has accused the commission not only of generalizing from the particular but of making assumptions and reaching judgements which are firmly in the educational arena.

"There is no doubt the commission regards the report as being a technical absolutely chock-full of educational judgements made by accountants. They show a very shallow grasp - if any education system."

Mr Banham rejects firmly the charge that educational judgements have been made. "We are not edu-



tionists and are not competent to judge the quality of individual lecturers' work or to assess the relevance of the courses they are teaching. We have to assume that all lecturers are equally competent and that all courses offered by local education authorities are relevant and appropriate to the needs of the local community.

"Local authorities do not like waste and our job is to present education with a choice of providing the same services at lower cost or a better service at a similar level of investment," he added.

Both the commission and Natfhe claim to be in the business of improving the effectiveness and efficiency of the service. Natfhe's reaction has been coloured by its experience of individual authorities unilaterally seeking to increase class contact hours, not to but to cut costs.

This is not the option the commission in general, and Mr Banham in particular, would prefer. Perhaps the two most notable exceptions the smallest class sizes in courses for non-advanced further education were concentrated in areas of the highest youth unemployment.

"We believe there is a very strong case for adding more value in FE by providing more full-time education for the many unemployed youngsters," Mr Banham says. "In the 15 hours a

week a principal lecturer is not in front of a class, we would rather more time was spent marketing the college's services to the people who really need to know what is available - local employers and young people."

The commission is also firm in its view that it is not seeking to drive colleges towards unattainable goals. "We are about encouraging the average to get to the level of the best, not about trying to ask for the impossible or seeking to criticize anyone."

Natfhe agrees that identified abuses, which it admits may occur, should be relentlessly pursued. David Trisman says: "If there is abuse of overtime payments during working time, for example, we would want to see them stopped. We want to end systematic overtime altogether, partly because it is open to abuse."

It echoes the commission's enthusiasm for eradicating waste where it can be identified, but draws its battle line at the suggestion that there is scope for thousands of students to be brought into the system without an increase in resources.

"The service has in reality been taking larger and larger numbers into the colleges for many years past," Mr Trisman says. "Independent bodies have identified a 20 per cent increase in the numbers in higher education over a period of some three-and-a-half years."

There are now comparable show the same has come into ill-equipped colleges. It's main condemnation is for what it perceives as the commission's assumption that education remains a static conventional examination culture has been overturned, to more individual attention to

"This report studies one of a lecturer's commitment on the time spent simply in the class as the only relevant most old-fashioned piece of philosophy we have heard of. It is like once accounts and auditors by computers and go back to Mr Trisman said."

Mr Banham is unimpressed. He tried to write the report measured in tone as possible. He would like to see a more constructive questioning of the rigid norms established by the report could be examined.

But the association said its report equated value with cost and pointed out that the quality of teaching could not be measured by cost. The association is also concerned by the higher proportion of first class degrees awarded in universities as one quality control indicator of public sector degrees standard.

This is really taking things too far. The difference is very small: 7 per cent compared with 5.5 per cent. If we compare "good honours degrees" - the percentage of all graduates with first and upper seconds - the university figure is 33.8 per cent, whereas the public sector figure is 35.2 per cent, a statistic no more nor less remarkable, but one to which Lindop does not refer.

The mystique of the first is such that we ignore the nine out of ten other students who do less well.

A source of comparison does exist. The First Degree Classification Transitory Database, from which I have taken most of my figures. Although the discipline classifications are not identical, we can see the overall transitory difference consists of

First fruits of the final effort

Geoff Payne considers the pitfalls in comparing student exam results

As students complete their struggle with exam papers and lecturers begin their struggles with the consequences, the academic year turns once more again to final results. Will it be a "good year" or a poor one? Have the students done as well as they should? How many firsts will there be this time?

Exam results are a great source of anxiety for academics, almost as much as for undergraduates. Nobody likes to feel that a year's teaching has borne no fruit, even if lecturers do not feel an undying affection for their students.

But results are not just about individual performance: a department's reputation is at stake. Student success means kudos and a better position in next year's pecking order.

Luck of success means days of defensiveness in the face of colleagues quick to interpret the number of good honours degrees as an index of departmental and academic quality. Ironically it is not only between colleagues, but also of first class degrees feature prominently in institutions' annual reports.

Indeed a similar view of quality has recently been applied to transitory comparisons. The Lindop report takes the higher proportion of first class degrees awarded in universities as one quality control indicator of public sector degrees standard.

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several broad groups, with distinctive patterns.

Thus while engineering and technology does resemble the overall picture, with 9.4 per cent and 8.4 per cent firsts, and 32.5 per cent and 30.8 per cent good degrees, the universities have more firsts and good degrees in science, social science, arts and languages.

On the other hand, in the visual and performing arts, and education, it is the public sector which awards the higher proportion of firsts and good degrees.

Within each of these categories, some subjects are much larger than others, which affects the overall weighting. For example, university science is relatively heavy in mathematics, physics and chemistry, three of the four disciplines awarding the highest proportions of firsts. In the public sector, apart from maths, the largest groups are biology and combinations of sciences, which in both sectors award roughly the proportion of firsts that physics and chemistry do.

Indeed, what is most striking is the similarities between disciplines, rather than between binary sectors. A subject in the universities awarding few firsts will almost certainly also award a few in the public sector, while more "generous" disciplines award higher proportions in both sectors.

If we rank disciplines by proportion of firsts, the first three deciles (or 30 per cent) of each classification contains 17 comparable subjects. In the public sector this covers all subjects awarding 3 per cent less of firsts and in the university sector those awarding less than 6 per cent, so that the difference between any pair of subjects is not great.

Of the subjects in the first public sector decile, three are also in the university first decile, two are in the second decile, and one is in the third. Of those in the second public sector decile, four are in the university second decile, and two are in the third. And in the third decile, two are in the university first decile, one is in the second decile, and one is in the third.

Spicing its threats of reduced funding with an occasional platitude about educational values, the long-awaited, often-heralded Green Paper on higher education makes pretty bleak reading.

Not that it contains much that is surprising: it is the predictable reduction of its argument and its familiar, narrow utilitarianism which are the most striking features.

No one who has observed Sir Keith Joseph's statements about higher education over the years will find the underlying prejudice against the humanities and social sciences unexpected; nor will the document's claims about the relationship between education policy and economic performance come as a surprise.

But the frequent repetition of a fallacy does not increase its accuracy, and the logic of the Green Paper rests upon propositions which are at best doubtful and for which no convincing evidence is supplied.

There is, it is true, an occasional nod in the direction of humane, liberal education, though in terms which contain an implied insult. We are assured, for example, that the Government does not "place a low value on the study of the humanities which, provided that high academic standards are applied, enriches the lives of students, helps to set the moral and social framework of our society, and prepares students well for many types of employment." (My italics.)

Quite so, but where is the evidence that high academic standards are not applied, or that courses in the humanities are more likely to have low standards than others? The slur is lightly pressed, but it occurs at the value judgement it implies runs through the Green Paper as a major theme.

Perhaps we should be grateful that the Government has noticed that "for many occupations a rigorous arts course provides an excellent preparation", but the paragraph which says so nevertheless ends by promising that "the proportion of arts places in higher education as a whole can be expected to shrink". To shrink, moreover, in a total population which will, on Government's plans, decline slowly until 1990 and rapidly thereafter.

It could not be otherwise, given the conjunction of financial strategy and economic priority which is the core of the argument. The Government intends to cut higher education spending by a steady 2 per cent per annum, and at the same time to continue shifting places from the humanities and social sciences to science and technology.

Since the statistics in the Green Paper them-



Exam results are not only a great source of anxiety for undergraduates, but for academics too

two deviant cases. Similar levels of correspondence are found throughout the ranking.

Among the subjects with low proportions of firsts are most of the social sciences, modern languages, the arts and business studies. Environmental studies and pharmacy are the two deviants which score low in the public sector, but higher in the universities. The subjects with higher proportions of firsts are engineering, maths and textile design, plus medical subjects and non-European languages in the universities.

What importance are we to attach to this variation? Is it really true that, say, physics with a total of 17.2 per cent of firsts attracts five times as many very able students as law, with 3.7 per cent? Or that physics departments are five times "better" than law departments? Or that physics degrees are five times easier than degrees in law?

None of these suggestions makes

much sense. Comparisons between subjects cannot be made in this crude way. Each discipline has its own tradition of marking and grading its students. Those based on reading and essay-writing give relatively few firsts, those based on experimentation and calculation give more. The proper comparison is within each discipline.

Academics defend the standards of their own discipline with much the same fervour and objectivity of medieval martyrs. Young members of staff, who often find themselves teaching service courses for degrees in other departments, regularly find the experience traumatic. To realize that in a given level of work earns 10 per cent more marks when part of the assessment in a degree of another discipline is a great source of anguish, which is only assuaged by the balm of assumed superiority about one's own tougher standards.

International differences can be

equally fraught. In one frame ever, one British market, and close attention to the quality of work, as did the Canadians and Americans. The problem was that 85 per cent of British honours was 65 per cent of a Canadian marking and 75 per cent for the Americans.

In this country, one particular case of variation is engineering, in which undergraduates are more sharply separated into honours and ordinary degree students. For example, 40 per cent of the 1982 Council for National Academic Awards' ordinary students in mechanical engineering and 45 per cent of civil engineering graduates obtained non-honours degrees.

The high percentage of good honours degrees awarded in engineering can be seen as a result of expressing firsts and upper seconds as a proportion of the smaller remaining core of honours students. If we take good honours degrees as a percentage of all graduates, the value for money side of this question is particularly relevant in the light of the current heavy and successful lobby by the engineering profession to obtain more resources for engineering departments.

The logic of the relativist position is to accept that they do it differently in engineering: "Post-Fineston Engineers do it by Design." Within their trade, they know what level of ability is indicated by their own bench marks.

However, even if one wishes to preach tolerance of one academic towards his or her neighbour, the uneasy feeling remains that we might perhaps learn something from a little more transdisciplinary analysis. It is one thing to caution academic boards and their ilk to be more careful in future comparisons of results, and to take like with like. It is quite another thing to establish a consensus about resource utilization or changes of practices that are every bit as ingrained among the academic profession as in the most conservative craft trade union.

The author is dean of social science at Plymouth Polytechnic. The Handbook for First Degree Classification Transitory Database is published by the CNA at DSU Publication No 3.

which is the educational right of every individual in a civilized society, but in the most limited definition of economic advantage, in both national and personal terms. That, surely, is the point of a nonsense like the "social rate of return".

The employability of arts graduates is a recurrent theme, although the statistics included in the Green Paper show that rates of graduate employment are no worse in the humanities and social sciences than in many areas of science.

Despite the fact that the Butler report shows that, in addition to a rapid increase in demand for graduates in some fields of engineering and technology, some information technology firms anticipate an increase in jobs for arts and general science graduates by the end of the decade.

Although lip service is paid to the value of an arts degree for "many occupations", the whole tenor of the document manifests the Government's belief that the economic value of such disciplines is peripheral. Yet this is not the view of the Confederation of British Industry's education and training committee, which has repeatedly affirmed the need of British industry for graduates with the skills and flexibility which are offered by those who have studied history, economics, philosophy and other arts-based subjects. Nor is it the view of many individual employers, who convey the same message to careers and appointments offices up and down the land.

We have no need to apologize for the quality of the service we offer, and we must over the coming months bring the Government to accept that the skills in analysis, criticism and exposition which our disciplines impart are as important to the resurgence of British industry as the particular vocational accomplishments which are taught to engineers and technologists.

The logic of the Green Paper is too narrow and restrictive to provide a blueprint for the future of higher education. Its priorities are too limited and its consequences too damaging to carry the day in the face of the real needs of Britain at the end of this century. It is the quintessence of Thatcherism, placing the most reductive definition of social benefits above the true requirements of an educated society and presenting as economic imperatives the fruits of prejudice.

Rod Lyall

The author is dean of the faculty of arts at Glasgow University.

The system of integrating placements and study has been under investigation. John O'Leary reports

Sandwich leaves a bland taste

Nor was there any doubt about the level of support for sandwich education either in higher education or among professional and industrial bodies. The various surveys confirmed that sandwich students were supportive even if some had reservations about their particular course, and full-time students were often envious of the experience being gained by their sandwich colleagues. Staff, too, were enthusiasts, but for money?

This, naturally, was where the committee began to fall out. The research was not based on tightly-defined control groups which would have allowed firm conclusions to be drawn on student standing and subsequent experience. And, with the committee containing members sandwich courses, the flavour of the final report was always likely to be contentious.

It was easy enough to agree on the approximate additional costs associated with sandwich courses. They are longer than full-time courses and are bound therefore to be more expensive. Taking the established weightings for college and polytechnic funding, it was estimated that the 58,000 students on public sector sandwich courses in England took £25 million from advanced further education pool, while in Wales the 11,400 students would cost about £4.5 million.

Since there is no similar formula for the universities, the same assumptions were made producing a figure between £6 million and £7 million. In addition, some £5 million was allowed for fees for the extra year of sandwich courses, to bringing the total burden to the taxpayer to some £40 million.

Employers were thought to spend up to £100 million annually on sandwich placements, through wages and the cost of supervision and training, with the Manpower Services Commission (MSC) contributing a further £100 million.

tion giving grants of some £4 million to offset these costs. However, since employers are able to set this expenditure against tax, as well as subsequent training bills, the true costs become impossible to quantify.

At first sight, the case for sandwich courses appears from some of the research findings to be less than clearcut where employers are concerned, but this is where the shortcomings of some of the research becomes obvious. There is opinion about the relative merits of sandwich and full-time graduates in engineering and business studies (although the sandwich graduates were strongly preferred in science and professional vocational subjects). But the same graduates, suggesting that the source and class study.

Sandwich graduates definitely had the edge where they had worked when it came to finding a job. More than half of university students and almost a third of polytechnic students had been offered a job by their temporary employers. Over the whole field of employment opportunities, however, the committee found only a small measurable advantage in terms of pay.

Continuing difficulties in finding sandwich placements can also be interpreted as indifference or even hostility on the part of employers, although the final RISE report attributes this to effects of the recession. Those employers who did offer placements were found to be overwhelmed by the number of applicants and would still remain involved without the encouragement of MSC grants.

Given the advantages the committee expressed placements and made greater efforts in this direction one of the four priorities for action. The others involved more critical evaluation of

placements, ensuring a close relationship between course content and work experience, and increasing flexibility between full-time and sandwich provision.

The conclusions to be drawn from the debate over many months. The first draft report was strongly critical of sandwich courses, leaving open to doubt whether it offered any benefits which could not be achieved through close links between college and full-time undergraduates.

There was an outcry from the sandwichable and it is understood that a letter of protest to Sir Keith Joseph, Secretary of State for Education and Science, before the draft was extensively rewritten. Even the second draft was felt by some members of the committee to be damning sandwich education with praise and further rewriting took place before the finished article appeared last week.

After such a process, it is not surprising the report appears bland and that the MSC now consulting the various interest groups about the possible ways of improving its system. The Green Paper included a paragraph summarizing the RISE report which said: "The evidence is that, partly because of failure of integration between its various components, the potential benefits of sandwich education are not always fully achieved."

It seems that the sandwich lobby has thought successful rearguard action where the RISE report was concerned, although many would have preferred a more positive verdict. But there may be other battles to fight yet.

It will be surprising if, in the aftermath of the report, there are not further proposals aimed at reducing the £40 million annual bill for the courses. The most obvious and dramatic of these would be to reduce the length of courses, although less sweeping measures would also encounter resistance.

An assessment of the costs and benefits of sandwich education; free from Room 505, Department of Education and Science, Elizabeth House, York Road, London SE1.

كتاب في الأصل

Pauline Stafford

From marking examinations to self-examination

I have taken time off to write this column from the midst of exam marking. The annual orgy of sado-masochism in which the entire education system indulges is upon us. With 100-plus scripts down and another batch about to arrive those of my readers who are still involved in the practice, not the theory or administration of higher education, may sympathize with the small thought of a script-marker.

I find exam marking one of the hardest parts of my job. There is none of the excitement or intellectual stimulation of a good book; none of the personal contact, the occasional surprise of the tutorial; nothing of the creative concentration required to remain critical and alert over the 34th essay on the impact of plague in the 14th century. The fascination of focus on rats, vivid spots and suppurating buboes has palled by the 15th script and a guilty craving for bowlers sets in.

Hard work and an increasing obsession with grades has drastically reduced their number, but there is always a sprinkling of students, especially in the first year, who betray the pre-lecture belief in the oral transmission of knowledge. Those dedicated lecture attenders who hope never to light relief in exam marking. Their "surfs" remain unwashed and an entire year of intensive extra-curricular activities underpins their bland generalizations. It always seems such a pity to fail them; second and third-year scripts become so dull as a result.

The more serious - and worrying - part of exam time is the obvious strain it imposes on students, especially mature ones. I cannot claim to have analyzed it statistically, but it is a strain which seems to be increasing in an inverse ratio to the decline of bowlers, presumably resulting from that same pressure to achieve the prize of a 2:1, the only classification which is still apparently a meat ticket. Sit in front of an examination hall of 200 students and the atmosphere is palpable. Creative tension which leads students to collapse during exams, which sees some of them flee the exam room and bring the grades of others toppling down from their normal performance levels.

Those of us who never knew exam nerves, and who are inevitably the successes of the examination system, have all too little understanding of the phenomenon until we see, year after year, that minority of our best students especially often find the ordeal of a final examination unbearable. The increased use of continuous assessment relieves some of the strain, though it brings its own problems in tow.

But it is not merely the ennuil of marking them which shakes my faith in the traditional examination. It may be few working situations which require the peculiar stress of an unseen three-hour paper on which the success of a whole year's work depends. Those employees who require the testing of such stamina are better equipped to define and assess it themselves than to seek this from the educational system. If I am assessing my students for the skills they should have acquired from a degree-level course, I am increasingly sceptical of this method of doing it.

The most positive benefit of exams is for those who mark them. They force us precisely to refocus attention on level students. It is always in the wake of exam marking that I turn back to my courses to reassess reading lists, to rethink tutorial topics, to consider the

relationship between lecture, tutorial and essay in the development of objectives. If it is a task I seem to undertake every year that is not solely because it can be sidetracked by the non-teaching work of the late summer term, but, I hope, because of an increasingly sophisticated definition of those skills and of the methods by which they may be acquired. More ominously it may also be a sign of the lack of detailed discussion of those skills and objectives in much of higher education and the related methodological self-consciousness which ensues.

Regular readers of this column will be aware that I do not always see eye to eye with the present Secretary of State for Education, but his concern with assessment in relation to objectives and thus of defined skills seems wholly defensible - with the important proviso that that definition must come from rigorous internal debate and not arbitrary external fiat.

Attempts to achieve such criteria have already begun at other levels, for physics, for example, by the Assessment of Performance Unit, by the joint Council for the proposed General Certificate of Secondary Education which have produced working papers, including one on history. In the latter the aims of a history course are clarified, assessment objectives, which are a development of but not simply synonymous with aims, are itemized and course content and assessment technique are discussed in relation to both.

These are, of course, tasks which those of us who have worked with the Council for National Academic Awards are familiar. Their central importance in higher education has the retention of a system such as the CNAA represents, since I remain unconvinced that such thinking is undertaken systematically outside of such dialogue. But CNAA submissions can sometimes simply discuss and justify individual courses within the framework of a subject (history, English, physics) whose wider assessment objectives and aims may remain implicit and undiscussed.

The GCSE document I have seen is certainly open to important debate, but its virtue is the primacy it gives to consideration of the subject discipline; techniques are then evaluated or constructed in relation to the aims of the subject. The value of such exercises for higher education seems indisputable, and many CNAA subject boards have already begun it.

Many will be incensed at the imputation, that they are operating in a vacuum, that they are unaware of aims and objectives, of the significant skills which they are teaching. The climate which has been created in education is not conducive to a positive response to critical demands and new definitions must come from within the profession to capitalize on the expertise already there. But it would be a confident, could assert that she/he had nothing to learn from such an exercise.

No one should be more aware than the historian of how far disciplines and their transmission are the result of accretion, inertia, pragmatism and so which are currently transforming their gentlemanly elite, such an interrelated examination of aims, objectives / skills is imperative. It is not a debate to be marked easier - or is that merely idle thought from the exam room?

Disease or a cure...

Having agreed to write a piece on "The Future of Psychoanalysis", I found myself stymied. In between me and the hole was another ball, in the form of the question: "What is Psychoanalysis?" We cannot consider the future of even a word unless we know what it means.

Freud, as far as I know, invented the term and intended it to refer to a particular method of investigating the mind scientifically (whatever Lacan and others try to make out), and a particular type of theory (the particular is allowed to change somewhat) to meet the method.

What, then, is psychoanalysis today? It really is necessary to be pedantic. I was speaking about writing this piece the other night with a Jungian analyst who was surprised that I would not call him a psychoanalyst. Psychoanalysis has become a concealing word, and a portmanteau word. Many professional therapists of all sorts call themselves "psychoanalysts" in a loose sense, while the psychoanalysts - in the sense that they would like to call the strict or proper sense, those both in the lineage of Freud's primal seven, and not heretical in theory or practice - wish at all cost not to be polluted or diluted by the professional sludge round them.

Even - and especially - real psychoanalysts disagree about who among them are really real psychoanalysts. According to my psychoanalyst (I hope I am not in breach of professional confidence), while I was in training analysis at the British Psychoanalytical Society, one psychoanalyst refused to have me in supervision, because my analyst had not really been psychoanalysed because his psychoanalyst had not really been psychoanalysed.

In a world-historical perspective, psychoanalysis, psychosynthesis, Jungian, Adlerian, gestalt, transactional, Klienian, Reichian, Rankian, Jungian, Groffian, experiential and behaviour schools may all close ranks against each other, become more and more rigid, narcissistic, autistic, paranoid, seeking self-identity and dying in the process.

On the other hand, psychoanalysis may achieve its much sought after elite status (psychoanalysis for the staff and officers and behaviour therapy for the patients or lower ranks), thus adding a historical footnote to Karl Kraus when he said that psychoanalysis is the disease it purports to cure.

Yet again, psychoanalysis, along with the rest, may find a consensus in feeling their way to a final common path to synthesis, which will not be a pastiche, through which a future may be found for the renaissance of a distinctively Western spiritual-moral-intellectual-emotional-somatic-cultural culture of the soul.

R. D. Laing

The author is a psychiatrist and author of *The Divided Self* and *Sanity, Madness and the Family*.

Psychoanalysis began as a therapeutic method, grew into a theory of mind - premised on a clash with human pasts. Much of its history as a discipline has been concerned with its own past, with establishing or revising the precise intentions of its founding father. Has the method become anachronism, unable to escape its origins? Is succession of therapists have suggested? Over the four weeks we have examined the legacy of the "Copernican revolution" in human psychology. How has the legacy been invested? What is the future of psychoanalysis?

'In my end are my beginnings'

... the less a man knows about the past and the present, the more insecure must prove to be his judgement of the future ... (Sigmund Freud). These words can be applied to the central theme of psychoanalysis and used to try a prognosis for future psychoanalysis, as theory and therapy.

A common misunderstanding of psychoanalysis is to see it as the application to psychic life of a unilinear determinism as though one beginning could predict an end. In fact, psychoanalysis, like other major theories, reads back the past from the present and therein traces not a single "true" but only relevant origins - in my end are my beginnings.

In the clinical setting, the present of the patient interacting with the analyst reveals the past. Psychoanalysis started as a form of treatment based on a radical reinterpretation of hysteria. Freud found that a symptom that clearly had no organic cause was suffering. The prohibition of certain lustful wishes of infancy banishes these to set up another domain where a large part of our lives are lived: the unconscious. The banished wishes and their dreams, slips, jokes - Development during this century have challenged, altered and confirmed its original model.

Among the revolutions introduced by Freud's work in the 1890s, I will mention two. It eroded the distinction between the mind and the body and it brought mental illness back from the margins to place it firmly at the centre of all human life. The multilogues can be understood, their expressions are communications. There is no categorical distinction between health and pathology, sickness and normality - one becomes the other in both directions.

This, together with the initial relationship between the theory that the therapy that is about understanding, is a crucial. It is echoed in the binding together of patient and analyst. For the psychoanalyst must see her or himself as a patient - understanding her own unconscious communications if she is to understand her patients.



These factors define psychoanalysis from other forms of treatment. Most obviously from practices that still insist that the illness is a separate category that resides as fact or potentially in the people but not in others, but rather in the encounter or the relationship. Psychoanalysis is a democratic ideology from psychoanalysis at the expense of its more complicating theories of the unconscious.

Societies always produce their margins. Although psychoanalysis had profound effects way beyond its own parameters, nevertheless it has mental illness as a distinct category or outside the social periphery of the current. Were psychoanalysis to stand to prevail over all, it would presumably disappear in its own redundancy. Without this loss of self, then, as has already happened, forms, emphases, its subsidiary and explanations will shift and change with the changing fortunes of a society.

Juliet Mitchell

The author is a practising psychoanalyst.

A climate and an ethic - finding

To us he is no more a person. Now but a whole climate of opinion. Under whom we conduct our differing lives.

Thus wrote W. E. Auden about Sigmund Freud. The social importance of Freud's ideas stretches far beyond an ethic. For instance, pastoral care for suffering individuals in our atomized, mobile, competitive, and hence inevitably anguished society, has been largely taken out of the hands of the old official clergy and transferred to a newly and spontaneously emerging profession of "counsellors". The old clergy, if it wishes to retain any kind of hold on its old pastoral prerogatives, has to adopt the posture and undergo the training of the New Counsellors, rather than vice versa.

The main technique and posture of the new pastoral version of psychoanalysis. Passive attention and listening are meant to elicit moral solutions, whose legitimacy and authority springs from the fact that they emanate from the suffering individual. This is a reflection, in part, of a general intellectual climate within which moral objectivism, the upholding and enforcement of independently known, general moral principles, has become increasingly difficult to sustain, lacking faith in any

extraneous moral authority or truth, moral sovereignty transferred to the individual.

This in turn is squared with the manifest incapacity of many individuals to cope, with a recognition of the instinctual and opaque nature of our psychic, and with the rationale of external help, by means of a midwifery theory of moral truth and mental healing. This pervasive vision horrors its central ideas and techniques from psychoanalysis.

For those who practise such "counselling", the authority of inner emotional truth seems self-evident. The decision must "come from within", otherwise it is invalid. In practice, it is pliable and adjustable, being respect for inward sovereignty with a bit of direct pushing of the humane and respectable values favoured by the counsellor.

In fact, this picture of the proper conduct of the moral life is by no means self-evident. Its plausibility is tied to our historic circumstances; to our moral scepticism on the one hand, and to a naturalistic vision of man on the other. The seeming self-evidence of the picture owes a great deal to the prior acceptance of something like the Freudian picture of man, which has worked out a version of the naturalistic image of man in some detail. The question is - is that particular picture defensible?

Decline and fall of the empire

theory by an ugly fact. Many lay people, such as teachers, probation officers, social workers, and other dealing with people but not aware of the large literature condemning psychoanalysis still harbour a pathetic belief in its usefulness, no doubt they too will learn the truth in time.

Some people still claim that psychoanalysis has given us important "insights"; yet there is no evidence that these "insights" are in fact true, and many of them are certainly not new. It has often been said that what is true in Freud is not new and what is new is not true; Freud borrowed shamelessly and usually without acknowledgement

from all and sundry - Schopenhauer, Nietzsche, Janet, Hartmann and many, many others who had pioneered theories of the unconscious, of repression, of anxiety, and so forth.

Freud was, in fact, in many ways a fraud. He made up much of the case histories he presented; they bear little resemblance to reality. The famous Anna O, whom he claimed to have cured (with Breuer) of her hysterical illness, was neither a hysteric nor cured, she suffered from tubercular meningitis and continued to do so without amelioration for the next 30 years - a fact well known to Freud, as

many testified. The "Wolf Man", another alleged miraculous cure, was introduced extensively 60 years after Freud pronounced him cured, alas, he continued throughout all these years to show precisely the same symptoms as previous to his treatment by Freud. Many other examples could be given.

Freud also consciously and dishonestly forged the history of his development, followed in this by his biographers and hagiographers. He claimed that his early books were either not reviewed at all, or condemned as rubbish. Quite untrue! They were all extensively reviewed in the technical literature and the reviews

were full of praise. This may be a fair method of the hero which Freud tried to establish, but that is how it was. Freud was a great teller of tall tales, the equal of the Christian Anselm and the Brothers Grimm, anyone who believes his tales is likely to be severely disappointed when reality intrudes. Tall tales have no place in science or philosophy, and psychoanalysis has no future as far as either is concerned.

H. J. Eysenck

The author was formerly professor of psychology at the University of London and director of the psychology department at the Maudsley Hospital.

Spring is on the way

Psychoanalysis began as a method of treating emotionally disturbed people and evolved as a body of knowledge concerned to understand the development of emotional disorders. Nowadays it aspires to cover the whole area of personality development and psychopathology.

From first to last Freud sought to make psychoanalysis a science and, in formulating his metapsychology (or conceptual framework) he enlisted ideas stemming from the sciences of the day, notably the concept of a special form of energy and, for development, Haeckel's now discredited theory of recapitulation.

The metapsychology has, rightly, attracted severe criticism; some have proceeded to claim that psychoanalysis is not and never can be a science.

A science is defined by the array of phenomena it is attempting to understand. In 1914 Freud stated that "the theory of psychoanalysis is an attempt to account for two striking and unexpected facts of observation: the facts of transference and of resistance." Later he emphasized that "it keeps close to the facts in its field of study ... it is always incomplete and always ready to correct and modify its theories".

Anyone who adopts this perspective can see a bright future for psychoanalysis. First, a new conceptual framework is now becoming available. It draws on current scientific concepts, which fit the data far better than the traditional ones: concepts from ethology to provide a base in evolutionary biology; from control theory to explain motivation; and from cognitive psychology to understand defence. Secondly, new methods of obtaining relevant data are being exploited.

In every field of science, researchers utilize whatever methods of observation provide relevant data. Despite Freud's example in doing so, many analysts become fixated on the idea that only data obtained in therapeutic sessions are relevant. Invaluable though such observations have been, no science can prosper using only a single source of data.

Working within the new conceptual framework and exploiting new methods of research, developmental psychologists, analytically qualified or oriented, are now reporting observations of the greatest relevance to our understanding of the problems that psychoanalysts grapple with. These include early phases of personal relationships, of the sense of self, of the emotions and of defence. The result is a radically new view of socio-emotional development. One aspect of this is a renewed emphasis on the influence that real-life situations and events have on personality formation.

The impact of this new work on our ways of helping patients will be significant. Even more important, however, is the guidance it gives in proposing preventive measures. In the worlds of medicine and psychology psychoanalysis is certainly still in a wintry spell. Yet spring's not far behind. There are indeed some swallows about already.

John Bowlby

The author is honorary consultant psychiatrist at the Tavistock Clinic and author of *Attachment and Loss*.



Putting theory and practice on a firm foundation

Freud's original hope that psychoanalysis could be established as a "science of the mind" in the same category as physics and chemistry has been abandoned by all except a few fundamentalist psychoanalysts.

Psychoanalytic theories are hard to prove or disprove scientifically and cannot be used for prediction. Psychoanalytic encounters cannot be exactly repeated or expressed numerically.

It is now widely accepted that psychoanalysis is a semantic theory which makes sense out of a patient's neurotic symptoms and past experience. Historians, studying the same past events, may make different interpretations of their significance.

Psychoanalysts belonging to different "schools" may emphasize the importance of varying aspects of the patient's story. Neither history nor psychoanalysis is invalidated by such differences.

Today, many of Freud's ideas are open to question, especially those concerning infantile sexuality and the relation of adult forms of neurosis to "fixation" at various stages along the developmental path. However, Freud's discovery of "transference" has led to intensive study of the relationship between the analyst and his patient and, from this, to greater understanding of the formation of, and significance of, human relationships in general. Many psychoanalysts now

focus their attention upon the difficulties which the patient has in interpersonal relationships, and are chiefly concerned with disentangling these as they present themselves in the here-and-now of the psychoanalytic encounter.

In England, John Bowlby's marriage of ethology and psychoanalysis has proved particularly fruitful. His three volumes *Attachment and Loss* draw heavily upon the work of students of animal behaviour like Robert Hinde, the Harlows and their predecessors, Konrad Lorenz and Niko Tinbergen. Attachment theory is concerned with a wider range of interaction between individuals than the sexual link which formed the chief focus of

Freud's interest. Man is a social being and, from the cradle to the grave, the meaning of a person's life seems predominantly bound up with the kind of intimate relationships which she or he is able to sustain.

Bowlby's work, springing originally from his interest in the evil consequences which follow upon separating the young child from his mother, has initiated a great deal of research into human growth and development which is beginning to provide objective validation of some hitherto unsupported ideas derived from psychoanalytic theory.

For example, the effects on the child of being brought up by a mother who is chronically depressed and of the early death of a parent are being studied in detail. Do social relationships protect adults from developing depression or other forms of neurosis and psychosis? How far can early failures in making satisfactory interpersonal relationships be compensated for and corrected through the agency of transference within the psychoanalytic encounter? Answers to such questions are well on the way to being available.

Psychoanalysis has been through a bad period recently. Because its early promise has not been sustained, there has been a danger, especially in the USA, that the valuable parts of Freud's insights would be discarded along with those which have stood the test of time. Today, research into the outcome of various types of psychotherapy is well established; and this, together with the theoretical framework derived from studies of animal behaviour, has given new impetus to establishing psychoanalytic theory and practice upon a firm foundation.

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ways of advancing the knowledge

There is no single or simple answer to this question, as that vision contains a number of strands, of unequal merit.

● The basic picture of man, which replaces the Enlightenment/empiricist model of the gourmet/accountant, avidly adding up pleasures and subtracting pains. That was nonsense. The new vision, popularized though not invented by Freud, pays regard to the blind force and deviousness of our drives, to our preoccupation with the constellation of our personal relations, our lack of inner candour and of categorical order. This new way of seeing man is certainly an advance on its rival, and must be taken seriously.

● The theory of knowledge contained in psychoanalysis; the claim to an allegedly unique access to the psychic deep, and the associated claim that treading this unique path is the necessary and sufficient condition for securing information about the crucial levels of our inner life. These claims seem to be absurd, even although (or because) they are protected by a variety of defensive techniques which inhibit or make impossible their testing. The famous "telescope" to the unconscious, the technique patented by psychoanalysis, seems to be neither reliable nor unique, nor therapeutically effective. The bizarre rules of its development - there must always

be two who are watching, and they are strictly unequal in status - ensures the cohesion (but for occasional dramatic fissions) and protect the hierarchy of the Guild of Practitioners; but they do not appear to be conducive to the advancement of knowledge.

● There is a variety of specific doctrines, within the overall framework of the first vision indicated above. It is almost impossible to say much about the merit of these theories. The concept of the Unconscious is quite unique. In as far as it is allowed, in its great cunning, to interfere with its own manifestations, and even with its own acceptance or rejection ("resistance") in the minds of researchers. This hopelessly loose connection between theories and data. A determined effort to tighten up these connections, jointly with a firm abandonment of the absurd theory of knowledge - which only egotists or reflects hierarchy but inhibits testing - may one day lead to some progress in this field.

On the betrayal of the bard

by Maurice Evans

Shakespeare: contrasts and controversy
by Kenneth Muir
Harvester, £20.00
ISBN 0 7108 0982 4

Professor Muir's latest collection comprises 12 essays on Shakespeare and related topics, published or delivered as lectures over the last few years. The "contrasts" which Muir handles with characteristic tolerance concern Shakespeare's methods of characterization and his attitudes, the shortcomings of critics and producers, and the text of *King Lear*. The "controversies" are explicitly with Coleridge and, by implication, with Middleton and Ford of whom Muir attempts a new assessment.

This book sums up much of what Muir has said before, and its ideas, even its words, are often familiar because he himself has made them so in such earlier works as *Shakespeare the Professional* or *Shakespeare's Tragic Sequence*. Indeed the unity of these essays comes less from their subject matter than from the underlying assumptions about Shakespeare which he has developed throughout his writing life, and which inform in some degree every essay here. His basic belief is that Shakespeare possessed a "unique degree of whiteness" — the capacity to immerse himself totally in his characters and let them grow according to their own natures, and the ability to resist the temptation ever to turn them into mouthpieces for his own ideas. For Muir the arch-heresy is to identify the attitudes of a character with those of Shakespeare himself, whether it be Ulysses's speech on degree or Hamlet's "What a piece of work is man"; and he refuses even to interpret Shakespeare's progress from comedy through tragedy to romance as an indication of any corresponding development in his own personal response to life. He sees the different genres as modes which allowed the exploration of different kinds of dramatic situation and character, encouraged by changes in literary fashion or the new possibilities which the Blackfriars theatre afforded.

Muir shows the influence of this particular kind of impersonal dramatic genius upon various aspects of Shakespeare's dramatic technique. In characterization, for example, which

discussed in the first of the essays, he argues that Shakespeare, unlike Ben Jonson or Shaw, never imposes his own interpretation but lets the characters speak for themselves or be spoken about by other characters. The fact that Hamlet is described by Ophelia, Claudius, Gertrude, Horatio and Fortinbras, and described differently by each of them, gives him a multifaceted quality like that of real life, and is the source of his extraordinary vitality and that of the society which interacts with him. Similarly, there is no overt didacticism in Shakespeare's plays; different moral attitudes are demonstrated by different characters, and the audience is left to make up its mind about them. Shakespeare's moral values are not expressed through specific formulas but through a truthful picture of life which forces us to recognize the nature of reality. "Any literature," that tells the truth, that exposes illusions, that reminds us that deeds have consequences, has... a didactic effect on its readers and on its audience... To tell the truth about the human condition is itself a moral act."

Drama written in this way, with autonomy of character and the minimum of authorial intrusion, will inevitably have a diversity which resists any easy classification into groups; and Muir insists here, as elsewhere, that every Shakespearean play is unique, and that Shakespeare wrote no Tragedy, only tragedies. The main critical crime is to deny this diversity and produce what he calls "partial Shakespeares", by emphasizing the common features and ignoring the differences, or by emphasizing a single aspect of a play at the expense of all the others. In his essay, "The Betrayal of Shakespeare", Muir anatomizes the main errors of both critics and directors in terms which resemble the idols to which Bacon attributed the contemporary errors in scientific thinking. The idols of the critics stem chiefly from the desire to fashion Shakespeare in their own image, whether by reading themselves into the characters as Coleridge interpreted Hamlet, or finding in the plays too specific a relevance to present-day problems, or selecting from the variety of religious or philosophical attitudes which Shakespeare explores only those which agree with T.S. Eliot's as among the chief modern creators of "partial Shakespeares". At the opposite pole to Stendhal who appears to have been



Sir Laurence Olivier in Granada Television's *King Lear*

totally insensitive to Shakespeare's poetry, Eliot was interested in the plays only as they were relevant to his own poetic practice; and for this reason he judged Jacobean plays as if they were Metaphysical poems, and condemned *Hamlet* as a failed "objective correlative". The idols of the directors stem from the nature of their trade. There is the tendency, for example, to streamline the plays so that they express a theme simple and clear enough for an audience to take in; or to court the audience by exploiting a fashionable trend—for example, turning the *Tamworth* of the *Shrew* into a feminist pamphlet. But the commonest source of the director's enhancement of his own reputation by being original at any cost; and while admitting that there are many good and honest productions, Muir gives a long and very funny list of gimmicky

ones which he has seen or heard of—a *Twelfth Night* with Fabian and Sir Andrew hiding in barrels to remind the audience of a pop-fantasy *Cymbeline*, a pop-fantasy *Cymbeline*, a *Measure for Measure* set in the Vienna of Freud. Muir seems to be unsympathetic to the modern practice of transforming the plays out of their own period into an arbitrarily different one, such as *Macbeth* in a post-holocaust setting, or *Hamlet* set in the gangster era of the twenties; but his list includes some productions which were genuine attempts to make a play more accessible to a modern audience without destroying its essential qualities. He quotes, for example, a Stratford *Much Ado* set in the period of the British Raj which I think I saw; and I remember very vividly the Prince, Claudio, Benedick and the rest returning from the war in the guise of a troop of heavy dragoons coming for a weekend at a Victorian country house

judgement, while slightly distrustful of the popular acclaim which *Professional Foul* has received. The topicality, he reminds us, of his East-West politics makes this play easier for an audience to identify with than some of its more abstruse predecessors; and the fact of its being a television script, accommodating itself to the more familiar conventions of television drama, might well account for its ready acceptance. But, more importantly, what Bransell calls the "dynamic process" by which Professor Anderson grows "towards greater enlightenment" also provides a stronger human interest than is usually offered in Stoppard's work. In so far as this is followed up in, for example, the character of Ruth in *Night and Day* and in the more domestic theme of *The Real Thing* it perhaps hints at a greater interest in human beings as such which is also needed to complement Stoppard's theatrical skills and intellectual passion.

In his conclusion Bransell comments: "We are finally left, then, with the playwright himself, with his inventiveness, with his theatricality, with his principles; in short, with his uniqueness." This accurately sums up the generic impression which Stoppard has stamped on our minds, but by omitting the human dimension it also implies a limitation. Luckily, however, as Bransell's study also shows, there are signs that this limitation may not be inherent, and that Stoppard may yet capitalize on the virtues so far best displayed in *Professional Foul*.

R. P. Draper
R. P. Draper is professor of English at the University of Aberdeen.

BOOKS

Scientific claims

Allen Powers: the pure theory of ideology
by Kenneth Minogue
Weidenfeld & Nicolson, £16.95
ISBN 0 297 78426 9

Ideology is a much invoked but little analysed concept in modern social and political thought. It is used in the titles of many books and is used in many arguments but in a latent and unexamined way.

If we look at the contemporary literature the term seems to have two major uses which differ from one another in very important respects. The first, called by Martin Seliger in an earlier useful study of the concept the "inclusive" sense of ideology, sees ideology as ubiquitous and as the appropriate label for any determinate political doctrine. On this view all first-order political positions and perspectives are seen to be grounded

upon more general principles — usually normative views of human nature and society. According to this usage these basic principles form the core of the ideology and one of the tasks of the political theorist is to trace the relationship between specific and more general principles, to assess the logical connections between them and to evaluate the grounds on which the basic principles are held. The other usage, and the one adopted by Kenneth Minogue in his stylish and interesting book, can be called in contrast the "exclusive" use of the term, where it applies not to all political doctrines but only to some. Indeed, on this view the term not only applies to only some political theories but also stigmatizes them.

The obvious difficulty with this exclusive use is to identify those features of a theory which can properly define it as ideological. Without a clear account of these criteria to call a theory ideological is an exercise in persuasive definition and is an example of the conjugation of the irregular verb "I have a social theory". He has a mere ideology. The great merit of Minogue's book is that it tries to deal with this problem head on and to identify those specific features of political and social theories which transform them from theories into ideologies. As such his subtitle, *The Pure Theory of Ideology*, is wholly

justified. Minogue makes the important point early on that those he wants to call ideologists clearly take the view that their conception of human nature and society is scientific — this is his view of John Maynard Keynes and Karl Marx, Engels, Lenin and Stalin, and it is this claim which underlies other claims of ideological systems, such as claims about false consciousness in which it is argued individuals misunderstand their social and political relations and as a consequence mistake their "real" interests. In this context he makes the very important and interesting point that it was the development of the idea of unintended consequences of human action that was crucial in the development of the scientific claims of ideology.

On the face of it this is a paradoxical claim because theories about unintended consequences, about social outcomes being the product of human action but not of design, have been important in the development of liberal political thought from Adam Smith to Hayek and Popper which regards itself as anti-ideological and sees this type of consideration to debunk the social and political pretensions of ideologists who believe that social and political change can be self-consciously planned. However, Minogue points out that as interpreted by Hegel and Marx, theories of unintended consequences allow the process of social and

political life to be explained in an objective and structural way without reference back to the intentions and purposes of individuals involved in the processes, a conclusion which gives a long way to reinforce the scientific claims of ideology.

The explanation of social processes and outcomes in terms of structural factors such as capitalism or patriarchy which, to use Marx's phrase, are independent of the will also leads to the prevalence of functional explanations in ideological theories. To use two of Minogue's examples: "It is a feminist contention that under patriarchy, feminine sweetness and docility are functional to male domination. In Marxism, a form of behaviour called 'consumerism' is thought functional to the structure of capitalism." This has two important consequences for Minogue: such explanations displace and may render inauthentic the agent's own explanation of what she is doing, secondly, the nature of the causal relation is obscure because it is difficult to see how the causal antecedents can be identified independently of what is being explained. These are important and intricate questions in the philosophy of social science and Minogue is right to concentrate on them, but perhaps the weakness of the book is that there is not a really sustained attempt to criticize sophisticated attempts to defend such explanations.

There is some discussion of G. A. Cohen's work but I would have liked to have seen a more detailed critique of this position developed. However, some telling points are made about the primacy of the contradiction between economic base and ideological superstructure in Marx which ought to get the book's readers thinking for themselves.

These sorts of considerations lead Minogue to an interesting discussion of ideology as analogous to a revelation in, for example, Christianity. He argues there is a similarity between ideology and revelation in that it is only by seeing one's dependence upon something outside ourselves, God or "these relations which are indispensable and independent" of our will that we shall be able to understand the world properly and act in the right way. This revelation will then enable us to see all other ways of construing the world in which we live as confused or illusory reflections of this deeper truth. However, the dilemma for the ideologist as Minogue sees it is that lacking the Christian's answer of the grace of God how can the occurrence of the revelation be explained given the facts of dependency, or, as Minogue interprets Marx, determination by material interests and conditions? Of course, as Minogue argues, in ordinary life we quite frequently misperceive things and relationships but in ideological doctrines these misperceptions are thoroughgoing and have to be explained structurally, which brings us back to the grounding of the claims about science and functional explanation mentioned earlier. The problem is "solved" within Marxism by the claim that the correctness of the perception embedded in the ideology is revealed in practice — by its correspondence to our practical endeavours, so that the conditions of truth for the ideology cannot be detached from practical adherence to it. Again there is an analogue with some versions of Christian theology, particularly Anselm's insistence upon the primacy of the principles of *credo* in *intelligere* and *fides quaerens intellectum*.

These considerations form the basis of Minogue's epistemological characterization and critique of ideology and the remainder of the book is concerned with an elaboration of the consequences of these issues for ideological views of the nature of the end of history, the role of politics within such a standpoint and the nature of the state.

As someone who has always operated with an inclusive view of ideology I find Minogue's attempt to characterize the opposing view thought-provoking. The argument could have been made more compelling by taking a belief system such as liberalism and attempting to show in a direct way how, in the hands of someone like Hayek, it does not fit into the ideological character of thought as he describes it. However, the book repays careful study and unlike many books in political science it is written in a style which is a pleasure to read and in addition enlivened by many illuminating references to his wide reading.



Sir Frederick Lugard, conqueror of Uganda and northern Nigeria and author of *The Dual Mandate* (1922), the bible of colonial administrators in Africa.

Raymond Plant

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Dramatic illusionist

Tom Stoppard: an assessment
by Tina Brassell
Macmillan, £25.00
ISBN 0 333 35135 5

This "assessment" is a thorough and comprehensive treatment of all Stoppard's writings to date, including the stage plays, radio and television scripts, the few short stories and the novel, *Lord Malquist and Mr Moon*. Assiduous attention is also paid to sources and influences, and rather too much space is devoted to summarizing plots and describing scenes and characters — though, to be fair, many readers will be in the position of not knowing or at least not remembering, all the phenomena duly recorded here, and they will no doubt be grateful for the information supplied.

The result is a book which suffers from an unnecessarily resolute determination to "cover the ground", but which is none the less likely to become an indispensable companion to Stoppard studies. For Tom Stoppard is now established, if not an establishment figure; and this book, or something like it, is an inevitable mark of his known for one or two celebrated successes, but equipped with a set of "works" which, in any thoughtful way, may be composed a recognizably Stoppardian world. The whole is beginning to become larger than the parts, with

the paradoxically literary critical corollary that each part qualifies for fitting into the jigsaw whole.

One of the themes to emerge from Brassell's study as a unifying principle in the dazzling variety of this world is that of the opposition between appearance and reality presented in the unusually contrived form of preposterously false-looking appearances which subsequently prove to be real. Frequently, the basic structure is that of a who-dunnit in which the bizarre is not an index to surrealist manifestations of the unconscious, so much as a deliberate, logical and positively demanding, the drama serves to unfold. This, for example, is what *Lord Malquist* shares with *After Magritte* and the philosopher's rabbit and tortoise in *Jumpers*.

In *The Real Inspector Hound* this process is carried further, as Stoppard breaks down the distinction between stage actor and audience by absorbing the opposite numbers in the play they are watching so that the dramatic illusion becomes for them a lethal actuality. In Brassell's view this involves the theatre audience in a disturbing shift of consciousness which "spirals outwards" till "the play demonstrates the unreality of all acting, and invites the audience to consider whether, in terms of another too are beyond their perception, they too are no more than actors in a play." What is finally posed is the question: "whose illusion is our reality?" In production, however, this is surely not so. The deliberate compelling of effects and farcical uncovering of disguises prevent any such involvement of the members of the theatre audience.

What they experience is essentially a comedy of appearances turning into a mock reality, not a mystery, but something capable of rational explanation, no matter how extravagant. In fact, as Brassell goes on to argue, Stoppard is preoccupied with the conflict of ideas rather than the expression of the Absurd. The influence of Beck-Beck-Beck is evident in *Rosencrantz and Guildenstern are Dead*, with its focus on the tragic paths of two minor courtiers caught up in a drama in which their incomprehensible parts are predetermined for them, and the only freedom they possess is the freedom to puzzle. In the interstices of that drama, over the impossibility of their situation. But the significantly complicating factor is Stoppard's use of the play-within-the-play. The prose of Stoppard's writing suggests a different plane of reality from the poetry of *Hamlet*, and the arbitrariness of both is heightened by their interrelationship. Even so, *Rosencrantz and Guildenstern* are not the spiritually maimed souls that Beck-Beck-Beck's Vladimir and Estragon are; very existence of their bewildered within the context of a drama known and understood to its full extent by the audience (ie accepting the assumption which is inescapable, that Stoppard's play depends on a reasonable degree of familiarity with *Hamlet*) affords an Zany though it may seem to be, and baffling to the principal characters themselves, their situation is not absurd.

On the other hand, Stoppard is a degree than Shaw. As Brassell says, "Shaw shares with Stoppard the idea

that a play can be a vehicle for debating views on life, rather than a method of presenting slices of it, but his rhetorical instinct often seems stronger than his almost the converse applies. His love of playing theatrical tricks seems stronger than his desire to persuade. Play after play is innovative in the sense that it seeks for ever more startling and entertaining devices for exploiting the theatrical effect, till the Stoppardian tale-cum-historical circus — almost great strength. His plays may be read with delight, but more than the work are scores that only come properly to hand, it is obvious from plays like *Travesties*, *Every Good Boy Deserves Favour*, *Night and Day* and, above all, *Professional Foul*, that what is said means as much to the play as the play itself; and that this, too, is a necessary strength, saving Stoppard from the futile games of playing and tail-chasing which so easily becomes the bane of self-consciously post-modernist art. (It is also part of the English pragmatism, playing with the energy which theatricality might otherwise dissipate. They should, ideally, be friends, not enemies, and requirement, however, is a difficult one, and *Professional Foul* may be the only play of the four mentioned above which comes near to satisfying it. Brassell seems to agree with this

judgement, while slightly distrustful of the popular acclaim which *Professional Foul* has received. The topicality, he reminds us, of his East-West politics makes this play easier for an audience to identify with than some of its more abstruse predecessors; and the fact of its being a television script, accommodating itself to the more familiar conventions of television drama, might well account for its ready acceptance. But, more importantly, what Bransell calls the "dynamic process" by which Professor Anderson grows "towards greater enlightenment" also provides a stronger human interest than is usually offered in Stoppard's work. In so far as this is followed up in, for example, the character of Ruth in *Night and Day* and in the more domestic theme of *The Real Thing* it perhaps hints at a greater interest in human beings as such which is also needed to complement Stoppard's theatrical skills and intellectual passion.

In his conclusion Bransell comments: "We are finally left, then, with the playwright himself, with his inventiveness, with his theatricality, with his principles; in short, with his uniqueness." This accurately sums up the generic impression which Stoppard has stamped on our minds, but by omitting the human dimension it also implies a limitation. Luckily, however, as Bransell's study also shows, there are signs that this limitation may not be inherent, and that Stoppard may yet capitalize on the virtues so far best displayed in *Professional Foul*.

R. P. Draper

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End of empire

Decolonization: the fall of the European empires
by M. E. Chamberlain
Blackwell, £2.95
ISBN 0 631 13935 4
European Decolonization 1918-1981: an introductory survey
by R. F. Holland
Macmillan, £16.00 and £5.95
ISBN 0 333 31677 0 and 31678 9

Lurking behind the anodyne abstractness of the term "decolonization" is one of the big historical themes of the last half-century: the end of European colonial rule over much of what is now called the third world. To the importance of the topic has recently been added the increasing availability of historical documents. The result has been a growing number of books: some very large, some short, some no more than stimulating, incisive essays. Now R. F. Holland has attempted an introductory survey, of moderate length, and M. E. Chamberlain has given us a brief, succinct summary.

It has to be said that a satisfactory framework for tackling the many diversities and ramifications of this vast subject has yet to be established. As Chamberlain rightly emphasizes, decolonization — as the transfer of political power and sovereignty — is a phenomenon by no means limited to the 20th century; and precedents in the 18th and 19th centuries, involving peoples of predominantly European stock, certainly had an important bearing on what happened after 1945. But even in terms of the decolonization which has so transformed the world since 1945 (Marxist arguments to the contrary notwithstanding) to relate the British experience to that of the French, the Dutch, the Belgians or the Portuguese; or the Asian experience to that of Africa or the Caribbean, raises formidable problems. The sheer number of individual cases and their manifold differences encourages a resort to the select case-study approach if a wearisome catalogue is to be avoided. But that tends to result in narrative juxtapositions and little overall interpretation. We are still a long way from a satisfactory synthesis, let alone explanation of the phenomenon.

None the less, as a summary of what happened, Chamberlain's book is an admirable example of a short but very substantial study of a very large subject. It sticks to a clearly-defined concept of decolonization as a transfer of political power and, in a mere 78 pages of lucid, well-informed and succinct exposition, it leaves very little out, adds some wise and judicious comment and then gives a useful introductory bibliography. It is one of the first six of a new series of Historical Association Studies which will be of great use to schoolteachers and undergraduates alike.

Holland's book is both more ambitious and less consistent. Different parts of it appear to have been influenced by different kinds of historical approach and writing. Thus, a difficult first chapter on the 1918-1939 period, replete with the academic jargon of the socioeconomic determinist school of writing, stands uneasily alongside an able summary, in chapter two, of the mainly political effects of the Second World War. The organization of so much diverse material is also problematical. The Asian decolonization of Britain and France is well-handled within one trenchant chapter. So is the sombre story of Britain's misadventure in the Middle East, with its enduring legacy of Arab mistrust. But Africa sprawls across four separate chapters, with disruptive results for the treatment of such important cases as Ghana, Kenya and the members of the short-lived Central African Federation.

Were changes in Europe as important as changes in the colonial territories themselves in bringing about decolonization? Holland says that they were, but how precisely the two are meshed is not made clear. He also acknowledges the vital role played by developments in the world at large such as the cold war, the establishment of a communist regime in China (1949), and the anti-colonial and anti-imperialist role of the United States in Indo-China and elsewhere. Yet these, too, remain as ghosts in the wings of the decolonization drama.

The record of European decolonization belies any view, from hindsight, that it was a process which the colonial powers predicted and planned. The Asian withdrawal (1947-1957) was crucial because it was the first time that a "fragmented and (in power-political terms) incoherent set of possessions of doubtful worth", in India, the accelerated transfer of power in

Dialogue of the deaf

The Falklands War lessons for strategy, diplomacy and international law
edited by Alberto R. Coll and Anthony C. Arend
Allen Unwin, £18.00 and £7.95
ISBN 0 04 327075 1 and 327076 X

The Falklands now has a large literature of which this is but the latest example. In part the interest reflects the current quality which the dispute has — two distant yet friendly powers going to war and incurring huge expense over what is by common consent a marginal piece of territory. But it is also because the Falklands, unlike, say, Northern Ireland or the Lebanon, seems to be a relatively self-contained and uncomplicated problem from which lessons may be learned and for which answers may be found. Finally, as one of the contributors to this collection notes, it has a little bit of everything (from flint tactics to multi-lateral bargaining) all in manageable quantities.

This general line does not stem from any naive faith in the United Nations Charter or in the commitment of UN members to its principles. Nor is it because those contributors are Anglophiles. Rather, it arises out of a concern that the United Nations should concern itself with the resolution of disputes themselves through a resource-scarce and ideologically divided world so the potential of bound-

ary disputes for triggering major wars increases. With it, the security of micro states and small peoples diminishes.

Of course for so long as the political dispute over sovereignty remains as the legal wrangling will continue. Argentina will argue for *uti possidetis*, continuity, and decolonization and Britain will respond with *terra nullius*, prescription, and self-determination. But these essays go some way towards resolving this dialogue of the deaf by making the point that legal principles can coincide with the national interest. As they make clear, Argentina failed to win more than token international support because of the dangerous precedent which her occupation of the islands set for so many other states. The essays on the failure to mediate the dispute are less provocative. Douglas Kinney provides a clear summary of the failure of bilateral negotiations, I. L. Claude and S. Perera an essay each on the manoeuvres in the UN and the Organization of American States. The most interesting piece is David C. Gompert's on the failure of the Haig mission. Written by an insider, it sketches the difficulties (compounded by military escalation) in which the USA found itself trying to reconcile two intransigent allies. The extent to which the USA may have inadvertently en-

couraged the junta is dismissed just a little too quickly (the junta's role in Central America, for example, is not discussed) but it is hard not to have some sympathy for Haig and his advisers.

The final group of essays examines the strategic lessons of the conflict, its Antarctic dimension, functional approaches to boundary disputes, and the possible role of the USA. There is much here to agree with (the importance of logistics, the need to avoid a scramble for Antarctica for example), but the idea of reducing tension by putting sovereignty to one side or involving the USA are less convincing. Throughout there is one notable omission — the islanders figure not at all. Yet they are part of the problem (one hopes they will be part of a solution) and they point to the fact that there is an identity dimension to this dispute. In this sense the Falklands are perhaps less of a self-contained object lesson in interstate power politics than is often believed. If this is so then the dispute may take longer to solve than anyone currently might imagine.

Walter Little
Dr Little is lecturer in Latin American politics at the University of Liverpool.

BOOKS

Future directed

The Effectiveness of Causes
by Dorothy Emmet
Macmillan, £15.00
ISBN 0 333 36632 8

On Hume's view of causation—according to a familiar objection—events are no more closely related than the individual tiles in a mosaic are related by the overall recurrent pattern. And, whatever Hume might say, this bare association of one event with another in a constant pattern is not enough for causality. Genuine causes must make their effects happen: they must, in a word, be effective.

This complaint is pressed by Dorothy Emmet in her short but ambitious new book. In particular, Emmet objects to the Humean stress on causes as events. She coins the evocative phrase "a Zeno Universe" to describe the underlying metaphysical picture of a world of discrete events ordered in patterned sequences. In such a world, there are differences in the properties of successive events; but the events themselves do not change. So, she claims, this is a world where there is no genuine transition, no real movement from one stage to another, hence the allusion to Zeno's arrow paradox.

Emmet allows, of course, that we do often explain happenings by citing an earlier event as the cause; but this way of talking is shorthand. When we "probe into the ontology behind the explanations, we come to participants whose claims and adventures are recorded in the descriptions of the events". For Emmet, then, events are not the "basic causal units"—instead, the fundamental notion we need is that of the operation of an enduring person or thing.

Some of these operations involve interactions between continuants: these are cases of *transcendent causality*. But underlying the possibility of such cases are the internal developments and continuities within a single thing, which keep it going through time as one and the same continuant. These Emmet describes as involving *immanent causation*. And she argues that it would be wrong to treat immanent causation as merely a special case of transcendent causation relating the successive stages of a thing; rather, in the persistence of a continuant, "the stages are not separate elements, but are distinguished as stages in a single on-going process". Or, as she also puts it, persistence "depends on an activity which passes from stage to stage, but is internal to the passage and not temporally prior to it". In summary, if we are to allow for the genuine effectiveness of causes, we need (according to Emmet) a conception of the world as an activity directed towards the future.

I have two principal worries about all this. First, I find Emmet's positive position opaque. The phrases about on-going processes which I have just quoted need to be understood in more than a neutral, thin sense. The echoes of Whitehead are to be taken seriously; but I am left unclear exactly what this involves. Second, Emmet seems radically to underestimate the resources of the rejected Humean position. For the Humean will of course aim to account for the perceived effectiveness of causes even in a Zeno Universe just as he accounts for the perceived wrongness of murder in his metaphysically value-free world. He treats both cases via a general theory about the mind's tendency to spread its reactions and habits of thought onto the world. And such projectivist accounts (which Emmet does not examine) can apparently sustain a good proportion of our pre-philosophical intuitions about causality or about values.

So, although this book is often very engaging and instructive, the latter-day Humean will probably judge himself unscathed by Emmet's overall line of attack.

Peter Smith

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A still from *Behzin Meadow*, a Turgenyev short story filmed by Sergei Eisenstein in 1936. The picture appears in a new book by Jay Leyda and Zina Voynow, *Eisenstein at Work* (Methuen, £17.95).

A single reality

Spinoza
by R. J. Delahunty
Routledge & Kegan Paul, £25.00
ISBN 0 7102 0375 6

Spinoza is not an easy philosopher to read. The relentlessly formal presentation of his magnum opus, the *Ethics*, with its array of axioms, definitions, theorems, demonstrations and corollaries, is apt to discourage all but the most devoted student. Nevertheless there is considerable fascination in Spinoza's claim to present a theory of knowledge, a metaphysics, an account of mind and body, and a set of substantive ethical doctrines, all within the structure of a single integrated theory; and the increasing respect nowadays for "holistic" approaches to philosophical and scientific truth has led to a renewed interest in Spinoza's work. A new translation of the *Ethics* by E. M. Curley is to appear shortly.

Last year saw the publication of Jonathan Bennett's stimulating monograph on the *Ethics*; and now we have Delahunty's book, the latest addition to Routledge's scholarly "Arguments of the Philosophers" series. Delahunty begins with an analysis of the geometrical method, and argues, plausibly, that it is no mere stylistic device, but has a crucial epistemological role to play: "Spinoza's choice of a deductive method is a strategy for minimizing the influence of Descartes' early procedure in the *Rules for the Direction of the Mind* is to make 'only truth premises which are known to be true'". Delahunty works his way through Spinoza's theory of error and the will, to discussion of the central metaphysical doctrines of substance and attributes, and the famous thesis that Nature is one substance—"God or Nature". In a sensitive treatment of Spinoza's so-called "pantheism", Delahunty interprets Spinoza's claim that God is the "immanent" cause of all things to mean "either that God is Nature as the totality of things, or that he is Nature as the totality of facts".

Perhaps the most fascinating aspect of Spinoza's philosophy to the modern reader is his account of the mind (sometimes called "attributive dualism"). The Spinozan doctrine that thought and extension are distinct attributes of one and the same substance seems to avoid the awkwardness of Descartes's ghostly substances (with the body which they pose, while preserving the compelling Cartesian intuition that there is something about mental predicates that places them in a different category from physical ones). But for all its initial attractiveness, what exactly does the Spinozan view boil down to? It cannot be a revival of Aristotelian hylomorphism (that mind is to body as form is to matter), argues Delahunty; for "Spinoza wanted to explode the scheme of ideas in which 'form' and 'matter' have their place, called 'dual aspect' theory that one

and the same event may be perceived either from the outside as physical, or introspectively as mental; for this constructs the attributes of extension and thought in too 'subjectivist' a fashion. It cannot be the 'parallelist' view that there is a mere pairing or correlation between mental and physical events; for Spinoza regards thought and extension as necessarily conjoined in one subject. Finally, it cannot be the modern materialist view that every mental state is identical with a brain state, for this assigns too great a priority to the physical (Spinoza holds not just that there is a physical change for every mental change; he also insists that the converse is true).

Delahunty concludes that there is no way of making consistent sense of thought and extension are both genuinely distinct and logically inseparable from a single substance. Much of this seems to me sound. Only in the case of the "dual aspect" view does Delahunty appear to have been over-hasty: there are in the literature subtler and more fruitful versions of this interpretation than the one he dismisses.

An attractive feature of Delahunty's book is that it locates Spinoza's doctrine in particular Cartesian context, outside of which they cannot properly be understood. The detailed attention given to Spinoza's ethical views is also welcome. Overall this is a thorough and comprehensive piece of work for Spinoza's achievements with a judicious appraisal of his shortcomings.

John Cottingham

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Detector of errors

Wyclif
by Anthony Kenny
Oxford University Press, £7.95 and £1.95
ISBN 0 19 287647 3 and 287646 5

Wyclif is best known as a 14th-century precursor of the protestant reformers. Anthony Kenny's study shows that his thought is no less important than his influence. In logic and metaphysics many of Wyclif's positions were unusual. Wyclif's notions were unusual, he strongly opposed the view, predominant in his century, that universals are merely terms. He denied that God could annihilate a substance—a contention on which Ockham and his nominalist followers based many of their arguments. His discussion of being is partly original and able to illuminate the logical form of some logic cannot analyse. As a political thinker, too, Wyclif was remarkable. Like a number of his contemporaries, he was opposed to many of the claims to authority made by the papacy.

although not to the papacy as an institution. But he based this position on an individual and striking premise: no one who is in a state of sin has any right to dominion or lordship. For this reason, the Pope's power to bind and loose is effective only so long as he remains free from sin, and a secular government is justified in confiscating church property if the clergy fails in its obligation to succour the poor.

Wyclif's theological views, Kenny believes, have often been misrepresented. His doctrine of predestination, as extreme determinism, and condemned the elect are divinely predestined to bliss, whereas God merely foreknows Wyclif's views on the Eucharist were finally lost his supporters in Oxford and at the court. But, Kenny emphasizes, Wyclif did not deny that Christ was really present in the consecrated bread and wine (as some 16th-century reformers would do). His objection was to the doctrine of transubstantiation. He thought that it was nonsense to maintain that the accidents of bread and wine remained without inhering in any substance: the very notion of accidents without a substance is self-contradictory. Kenny writes, with lucidity and ele-

introduced the term "family resemblance" during the course of a discussion of one of the central features of our use of language, namely the group together rather than the different under one general term. It is, he observed, tempting to suppose that, so because of some defining property, some characteristic which they share. But this temptation should be resisted. For when we look for the defining property of, for example, things we call "games", we find merely a pattern of similarities, "family resemblances".

It is, as Hunter says, natural to point to suppose that what Wittgenstein is doing is offering one non-criterion in place of another, to decide whether something is a game not on the basis of a defining property but rather on the basis of obscure similarities. But this temptation should be resisted. For it would presuppose that our use of words like "game" is governed by criteria, though common. Whereas the truth is that, whether, for example, chess is a game we unhesitatingly reply that it is, because of pattern of characteristics which it possesses, but simply because this is the sort of activity to which customary to apply the word.

No doubt this argument leaves the reader wanting an account of what it is the notion of family resemblance supposed to explain. Nor is it clear that he has one. Nevertheless his reluctance to accept the obvious (and too widespread) interpretation of Wittgenstein's remarks does enable him to throw light on them. Elsewhere, however, his temptation to find paradoxes and conundrums in the philosopher's work is less beneficial. In particular, his chapter 25, "On the Soul", where, confronted by Wittgenstein's remark "The human body is the best picture of the human soul", Hunter expends considerable energy trying to explain what Wittgenstein could have meant here. For, he suggests, a picture of a human body can more bring out what is meant by having a soul, than a picture of Wittgenstein at work could bring out what he meant by having a powerful intellect. No doubt this is true. But it is irrelevant, since Wittgenstein does not say that a picture of the human body is the best picture of the soul. He says that the human body itself is the best picture of the soul. And though it may be puzzling, it is by no means as puzzling as that which Hunter falsely attributes to him.

This is not an isolated instance in Hunter's writing, and it leads one to wonder about his determination to present Wittgenstein as a compiler of philosophical paradoxes, apparently intent on concealing his ideas from the reader. Hunter does make an attempt to explain what would otherwise seem more perverse, by suggesting that Wittgenstein's intention was to make his reader think for themselves. But on the face of it this is to confuse what is philosophically perplexing with what is merely obscure.

R. W. Beardsmore

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THE TIMES HIGHER EDUCATION SUPPLEMENT 28.6.85

BOOKS

The place of war

War and Society in Renaissance Europe 1450-1620
by J. R. Hale
Leicester University Press and Fontana, £15.00 and £3.95
ISBN 0 7185 122 4 and 00 686017 6

Sir Walter Raleigh, writing in the opening decade of the 17th century, expressed his belief that the ordinary theme and argument of history is war. Yet until recently historians have been reluctant to put war in the centre of their picture, and the topic was tacitly abandoned to military specialists. This has now changed, not least through the efforts of J. R. Hale, and in this latest offering he sums up two decades of research and gives his overall impression of the importance of war in the life of early modern Europe. He begins with a survey of political events and movements, covering the ground rapidly and picking out only the significant features. The uninitiated reader is likely to find this too compressed to be easily understood, but Hale's volume is one of a series, the Fontana History of European War and Society, and is designed to be used in conjunction with the well-established Fontana History of Europe, which provides a more general background.

When Hale turns to what he calls "the military reformation" he is entering familiar territory, but it is most helpful to have the main arguments and conclusions so clearly set out. The 16th century was the age of infantry, for the pikemen had established their superiority over the medieval armoured knights. Cavalry had been expensive to maintain, but infantry were relatively cheap and armies therefore tended to increase. The major battles in the Hundred Years War had been fought by groups of 7,000 to 15,000 men, but in the 16th century Gustavus Adolphus were commanding armies which numbered over 100,000. Another striking development was that of firearms, and even Spain, with the wealth of the Indies at her disposal, could not always meet her commitments. If military expenditure had been covered entirely by direct taxation the internal coherence of the states of early modern Europe would have fragmented. It was to avoid this that



A daguerotype from 1849 showing Parisian workers reading newspapers, an illustration from *The Nineteenth Century* edited by Asa Briggs (Thames and Hudson, £18.00).

Soldiers, apart from a handful of gentlemen-volunteers, were drawn from the dregs of the European population—the sort of people, it might be thought, who would most easily have succumbed to the lure of regular pay and the chance of plunder. Yet in fact they had a marked aversion to military service, but to be forcibly recruited, and showed their feelings by deserting en masse. Hale attributes this to the fact that European society, although violent, was not given to militarism; the aristocracy, for instance, who set the tone, had been civilized and preferred the pleasures of peace to the discomforts of war. This attitude was widely shared, even by the poor, whose pleasures were enormous and increasing, and young men, likely to have wives and children whom they were unwilling to leave. Army pay was poor, the prospects of death or maiming were high, yet the early modern state made little provision for old and wounded soldiers or the dependants of those who had fallen in its service. Indeed, it could not afford to do so, for the costs of war were enormous and increasing, and even Spain, with the wealth of the Indies at her disposal, could not always meet her commitments.

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Roger Lockyer

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Radical thought

The People's Science: the popular political economy of exploitation and crisis 1816-34
by Noel W. Thompson
Cambridge University Press, £22.50
ISBN 0 521 25795 6

The People's Science is the story of the radical alternative to classical political economy. In the 1820s and 1830s a body of anti-capitalist and socialist political economy gave rise to a theory of value based on the exploitation of labour, and a theory of economic crisis based on deficient working-class demand; both were antithetical to classical doctrine. These theories were developed in the texts of key radical economists and similar views were diffused widely among working people through a cheap radical press. This radical press emerged after 1816, but its major publications—*The Crisis*, *The Pioneer*, *The Voice of the West Indian*, *The Destructive* and *The Poor Man's Guardian*—had all come to an end by 1835.

Thompson traces developments in the popular political economy of value and crisis between the 1820s and 1830s from theories based on natural rights to analyses in terms of factors endogenous to the economic system. By the 1830s capitalists and anti-unionists were blamed for exploitation and poverty. But solutions to exploitation were couched in terms of changing the system of exchange and distribution, and not in terms of challenging the relations of production. Theorists and the press sought equitable exchanges

between labour to purchase its own capital goods. The best option for labour was in making itself independent of capital. The alternative society espoused by J. F. Bray, for example, was made up of small communities and joint stock companies.

While most of the classical economists saw in the recurrent bouts of crisis and depression of the post-Napoleonic period only temporary problems of excess supply or excess population, the radicals developed a theory of economic depression. They argued that a glut was caused by production for profit rather than for use, which made possible even a glut of necessities. The radical theory of crisis was intimately tied to a critique of the monetary system. Money symbolized the existence of a standard of value which gave no weight to the social utility of commodities. Radicals emphasized the extent to which money and market values deviated from real labour values. Radicals hoped for more equitable labour exchanges which would lead on to producers' unions. Thompson argues, however, that this "obscure" view of the nature and role of money prevented the radicals developing any fundamental challenge to property rights.

Thompson believes that it was the limitations of radical theory—found both in its theorists and in the radical press—which largely accounted for the decline of this critique of political economy after 1834. Thompson identifies the focus on distribution, on equal exchange, and on money as inhibiting the development of a fundamental critique of the social and economic system in these years. Practical concerns—factory reform, the new Poor Law and the People's Charter—also drew radical attention away from theory.

Without treading new ground, *The People's Science* offers a very useful

account of both the radical theorists' arguments about value and crisis, and opinion in the radical press in the early 19th century. There is also a short annotated bibliography of the major labour periodicals dealing with economic issues. This attractively produced volume will thus provide a valuable teaching guide in an area where there are few recent and accessible studies.

What Thompson's summary fails to capture, however, is the contemporary excitement of the issues. His relatively straightforward categorization of the theorists reveals a concern to condemn the limitations of theoretical framework rather than a historical ambition to understand the meaning, contexts and idiosyncracies of ideas. This is nowhere more apparent than in the dismissive treatment of monetary issues. A longstanding radical critique of the national debt, speculation, the growth of "fictitious" capital and the monopoly control of bankers was central to a radical politics of opposition to rentiers, the "unproductive", the "idle parasites" of old corruption itself. The monetary system was widely recognized as fundamental to politics and the social system. But a comprehensive study of the monetary issue in radical as well as high politics from the 18th to the mid-19th centuries has still to be written, though that study now be in effect. Thompson's study remains within the traditional history of ideas, when vital issues like exploitation and crisis need to be set in their social and political context. Nevertheless, it considers seriously an important tradition of English economic thought which is now all but forgotten by economists.

Maxine Berg

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Territorial conflict

The Origins of the Russo-Japanese War
by Ian Nish
Longman, £6.95
ISBN 0 582 49114 2
The Anglo-Japanese Alliance: the diplomacy of two island empires, 1894-1907 (reissue)
by Ian Nish
Athlone Press, £25.00
ISBN 0 485 13139 0

With the publication of a third volume it is already clear that Longman's *Origins of Modern Wars* is to be no mere run at the mill teaching aid. There is no doubt that these attractive, jacketed books will become a familiar sight on every campus, but they will also be of the utmost value to all scholars, politicians, diplomats and journalists with a professional interest in why some international crises are resolved by war rather than by negotiation. A comparative approach is stimulated by the general editor, Professor Henry Kissinger, who ties his foreword to each volume for a running commentary on the findings of his contributors to date. This series looks set to be one of the most exciting and influential in the historical world.

Professor Nish is, of course, our leading authority on Japanese diplomacy in the Meiji era, but he is equally familiar with the Russian matter, and treats the deteriorating relationship between the two powers with the same impartial detachment which he brought to his study of the Anglo-Japanese Alliance. This has now been reissued with a preface usefully referring to archives and monographs which have become available since the first edition in 1966. In his new work Professor Nish gives due weight to that alliance and to the general international context but he concentrates on the development of Japanese, Russian, Chinese and Korean policies in the 10 years before Japan initiated hostilities with an attack on Russian ships in Port Arthur.

The Russo-Japanese war of 1904-5 acquired global significance through its association with revolutionary upheavals in Russia and through the enhanced nationalism within the colonial empires to which the spectacle of an Asian state defeating one of the great European powers gave rise. The war itself, however, was regional in origin and concerned with the destiny of specific territories in north-east

Asia. Russia and Japan had been simultaneously modernizing in order to avoid dependence on the more advanced powers. Leaders in each state were tempted by the manifest weakness of China and Korea to bid for control of some of their territories which could be of great strategic and economic importance to them. Attempts to negotiate an agreed distribution of power and influence in Manchuria and Korea failed and the issue was settled in a clear-cut fashion by war. Attempts by historians to agree as to whether the war was avoidable have had less clear-cut results.

The Japanese certainly interpreted events more successfully than the Russians. Their sources of information about their opponents were better, and they were clear as to their own objectives. The Russians underestimated Japanese readiness for war and, by the clumsiness with which they signalled their own vaguer intentions, convinced even the least hawkish Japanese that war was unavoidable. Hence, although the Russians did not want war, their misreading of the position precipitated it.

Professor Nish doubts whether the war was in any case preventable. This is not because he sees it arising from impersonal "forces" beyond the control of the participants but because the ways in which the situation came to be viewed in Japan and Russia gave little or no scope for a mutually acceptable compromise. These conflicting perceptions were in no sense predetermined or unalterable. In each country their source was to be found in a group of political leaders, bureaucrats, diplomats, consuls, generals and admirals, who offered rival opinions as to what could and should be done about Manchuria and Korea. Professor Nish identifies these individuals and the development of their ideas, and shows how the considerable disagreements within each group came to be resolved. The mix of personalities was clearly crucial to the resolution of the disputes; illness, withdrawal, resignation or loss of influence could decisively affect the interplay of ideas. At the beginning of 1904 the prevailing constructs in each capital had become incompatible, and Japanese leaders, believing time was against them, opted for war.

Professor Nish's lucid and convincing exposition of how this impasse was reached is diplomatic history at its very best.

David Gillard

Dr Gillard is senior lecturer in history at the University of Glasgow.

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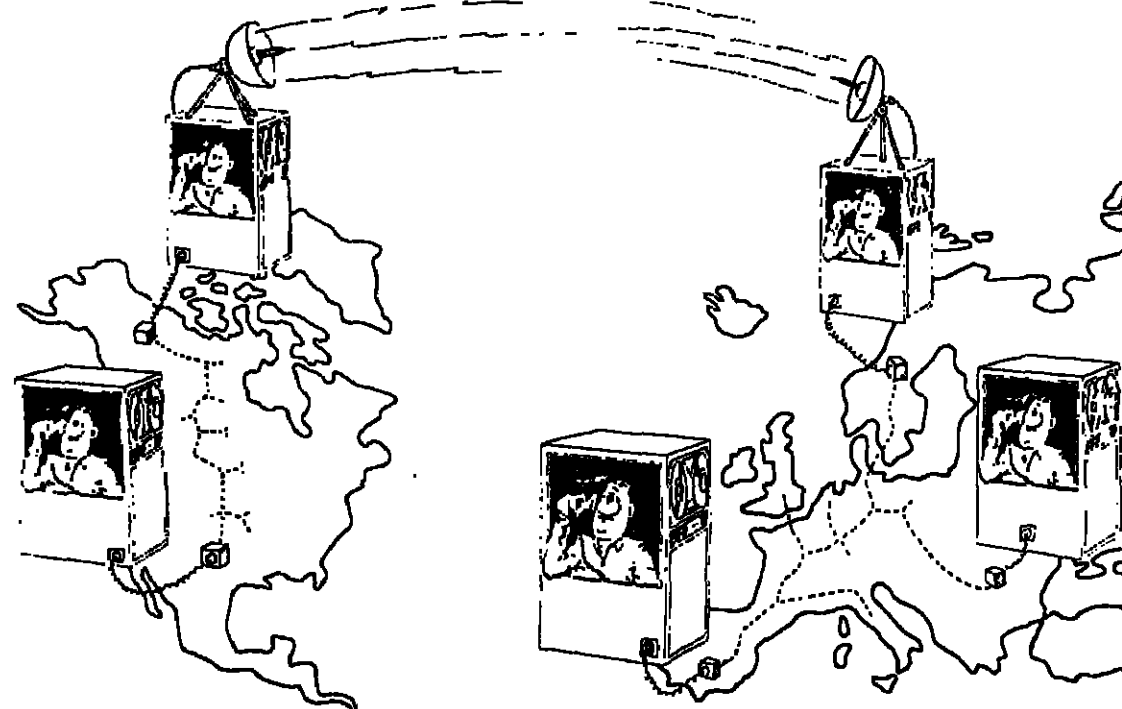
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Not so much an operating system...

David Barron on how Unix has established a cult following in the academic world

Go into almost any computer science department, and you will find that the departmental computers use the Unix™ operating system. Like Pascal, Unix has become a *de facto* standard purely on its own merits, without the aid of (or despite the opposition to) the major computer manufacturers. Like Pascal, it arouses an almost religious fervour in its supporters.

So what is special about Unix? Older readers will remember a 1960s television satirical programme billed as "not so much a programme, more a way of life", and that sums up Unix. An examination candidate wrote that "the purpose of the operating system is to come between the user and the computer", and that is the feeling you get when you use the operating systems offered by the likes of IBM and ICL. (Graftiti seen on a US campus - "Using TSO is like kicking a dead whale along a beach".) Compared with such

systems, Unix is simply a better way of using a computer. It offers the programmer a uniquely productive environment in which to work or, as somebody said, "it's the only operating system that actually helps me to do my work".

Until recently the workings of the United States anti-trust legislation meant that the American Telephone and Telegraph Company (AT&T), although they were allowed to licence others to use it. Nevertheless, it achieved supremacy in the educational world: just how did this come about? It was certainly not through any great effort on the part of AT&T; indeed, their policy was more one of benign neglect. They offered Unix licences to the academic world for little more than the cost of shipping the magnetic tape, but after that you were on your own. There was no support,

there were no bug fixes. If it went wrong, you fixed it yourself. It was against all the odds that a system distributed on this basis should prosper, but it did. Paradoxically, the lack of support became one of the strengths of Unix. Users had to band together for self-help, and user groups were formed to exchange experiences, modifications, bug fixes and new software. These national user groups together formed an international Unix community. Unix sites are now linked by an extensive computer network which facilitates the exchange of news and experience, making even small departments feel an integral part of the larger community.

Everything about Unix was against all the odds. In 1970 received wisdom was that multi-user operating systems required hundreds of man years to develop, and needed vast amounts of machine capacity to run. The first version of Unix is reported to have been written by two men in an attic, in about a year, and it ran on a PDP-7 computer so small that it would have been dismissed as a toy by the mainframe manufacturers. The success of the system was due to the fact that its designers were practising software engineers who knew the kind of environment they wanted for program development. Whereas the selling point of the mainframe operating systems was the long list of "features" that they incorporated, the strength of Unix lay

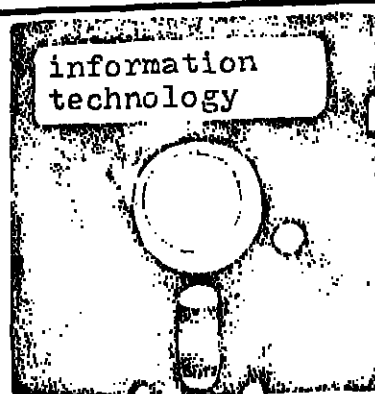
largely in what its designers left out. As in the case of Pascal, they identified a minimal set of essential features, and arranged for these to cooperate harmoniously. They did not embed their own preconceived ideas about what the user would want to do, but gave him an unusually congenial framework in which to operate.

Although this is not the place to list all the innovations (many of which are being re-discovered even now), I must mention three critical features that contribute to the "Unix philosophy". Files have no internal structure, so data produced by one program can always be used by another; input/output devices, files and programs are treated homogeneously, so that programs don't need to know where their input is coming from or where their output is going to; the overheads of creating processes is so low that users are encouraged to use concurrent processes. Taken together, these concepts make it easy to link together a series of programs in a *pipe*, the output of each being the input of its successor. Thus, complicated operations do not require complex programs, but the interconnection of relatively simple components (a good engineering principle). The linking is done at a high level by the command interpreter, so that, to quote one of the system's developers, "the error-prone and expensive process of program writing can often be replaced by the process of program using".

Thus, Unix encourages you to make programs out of re-usable components. Faced with a new problem, the experienced Unix programmer does not immediately think about writing a program; his first thought is to see whether there is a program to do the job already or, more commonly, whether he can string together a number of existing tools to do the job. Unix is not dependent on one particular kind of hardware, and programs written in Pascal or C can be easily transported to another system. Over the years an immense body of software has been built up and the ready availability of this is one of the major attractions of Unix in the academic world. For example, the systems in my department use software that we have acquired over the years from Amsterdam, Berkeley, Heriot-Watt and York, to name just the major contributors.

It is often stated in the press that Unix is not "user-friendly". It all depends what you mean. Most users find it exceedingly friendly because its commands are short, its error messages are crisp, and it does the sensible thing without being told. I agree that these characteristics do not make life easy for the beginner or non-specialist, but it is too easy to equate "learner" with "user" in "user-friendly". In any case, you don't have to use the interface provided by the system: the ground rule of Unix is that if you don't like it you can change it. My local systems have two different "shells" (command interpreters) available, and one of my students has just finished a natural-language interface as a third-year project. The Unix personal computer announced by AT&T in the United States has a complete menu-mouse-and-icon interface for casual users. You can implement any kind of user interface you want: Unix doesn't get in the way - the only limit to what you can do is your own imagination.

Because there is seemingly no limit to what you can achieve, and because it is a particularly elegantly constructed system, Unix attracts a particular breed of systems programmer who obtains great satisfaction from finding out the inner workings of the system, and then doing all sorts of clever things with it. Every installation has its guru, its wizard, and possibly its kernel hacker. The guru is essential: the documentation of Unix is terse and there is no substitute for experience; the guru provides the folk-memory on which new users can rely. The wizard is useful if kept in his place: he can do all the things that are not described in the manuals, and faced with an apparently impossible task he will come up with an ingenious and incomprehensible shell script to do the job. Unfortunately, some wizards succumb to the intellectual challenge, and gain their satisfaction from doing things whether they are wanted or not. They delight in making "improvements" so that you never know from one day to the next exactly what is in your system. Kernel hackers understand the



workings of the kernel - the innermost heart of the Unix system. (Note that the word "hacker" has lost its original meaning, which was someone who studied and programmed computers purely for the fun of it. The popular press has adopted the term for people who gain illicit access to computer systems. A Unix hacker, however, is a hacker of the old breed.) You will need a kernel hacker if you want to connect exotic devices to your system - unless someone else has connected a similar device before, in which case you just beg a copy of the code from them. Students find Unix intellectually exciting, and a department may have a problem with amateur wizards: the story of the Sorcerer's Apprentice has many parallels.

Unix was one of the earliest systems to offer sophisticated text-processing ("word-processing") facilities, and the typical academic Unix systems spends a lot of its time handling text. When you take out a Unix licence you get for free a formatter that can drive a phototypesetter, and this has led a number of computer scientists into the study of typography (the digital variety) and typesetting. One university uses Unix to typeset all its examination papers (especially the mathematical ones), and there is a flourishing research activity in "electronic publishing" that would probably never have got off the ground but for the fact that the typesetting program came free with Unix. It is fascinating to see the way in which a software system has acted as a catalyst, transmitting the enthusiasm of an American scientist in the early 1970s, for digital typesetting to subsequent generations of scientists all over the globe.

It is significant that even within universities the Unix revolution has been a grass roots affair. It is the computer science departments that run Unix, not the computer centres. Directors of computer centres don't like it. The usual argument (before AT&T offered support) was that they could not risk using software that did not have the manufacturer's support. Considering the trouble they had with software that was supported by the manufacturer, this has always struck me as a preposterous stance to take.

The real reason is, I think, a deeper one. It is not, as the cynics would claim, that directors are opposed in principle to anything the users want. I believe that they feel threatened by Unix. Computer centres like to have a nice ordered world, where everyone uses the software provided by the centre. To them, Unix means anarchy - users who don't like the command language are free to write their own, or to import one from a friend elsewhere. Even more threatening is the thought that a substantial computing system can be run without manufacturer's support and without an army of systems programmers. If it's that easy, people will ask: why have you had such a large budget over all these years? In universities it is about to be re-enacted, with the director of the computer centre taking the role of General Custer. But eventually they will give in to Unix, as they did to Pascal. Although it is not the perfect system, it is the best there is at the moment; and it has achieved a critical mass that will make it unstoppable.

"Live free or die" was the motto on the lapel badges at the early meetings of the Unix User Group. It's nice to feel that the good guys win sometimes.

Professor Barron is head of the department of computer studies at the University of Southampton, and author of "Computer Operating Systems" (second edition, 1985).

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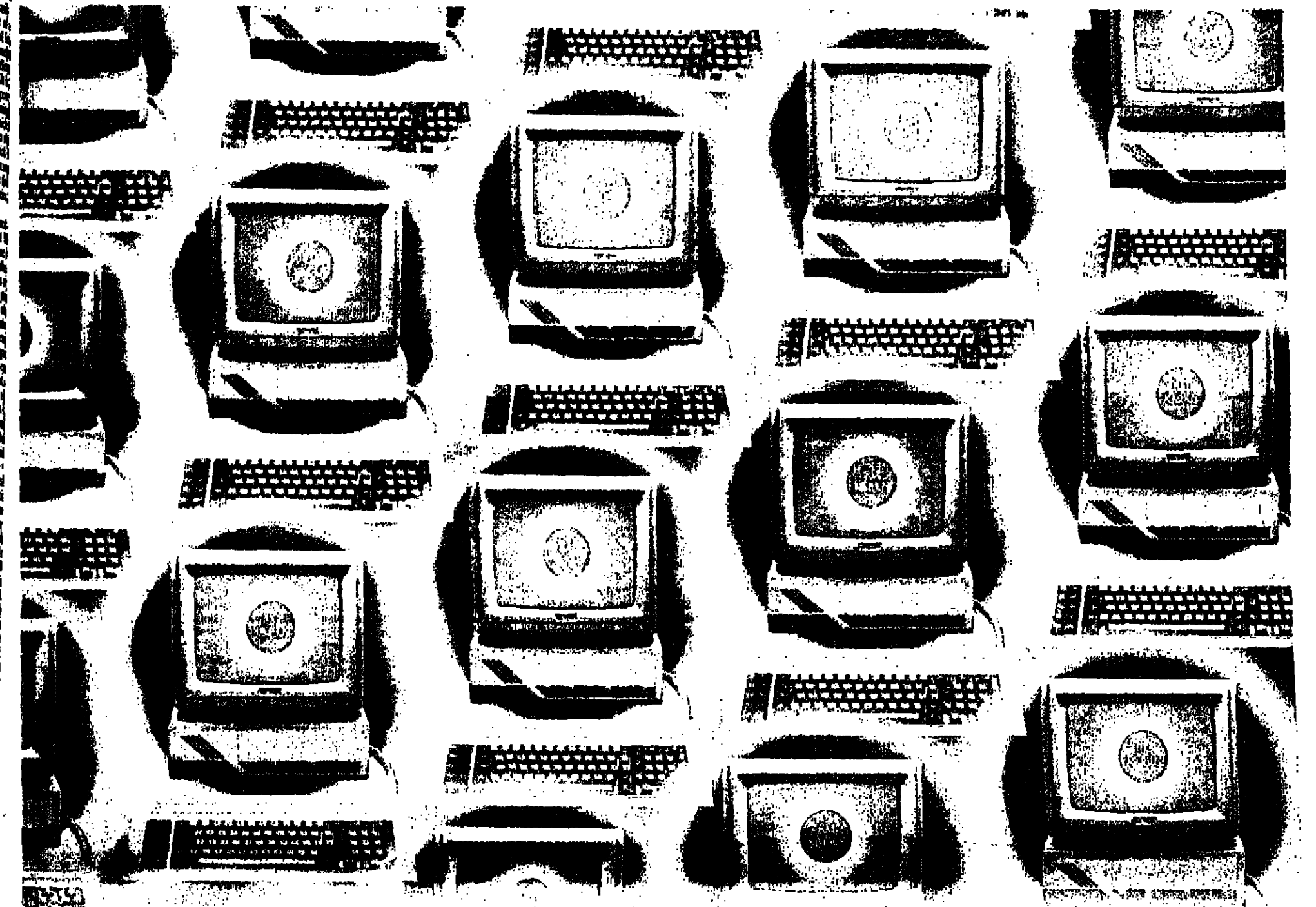
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Speaking the same language

Rex Last examines the fortunes of computer-assisted language learning

In 1949, an American researcher called Warren Weaver produced a memorandum with the innocuous-sounding title "Translation". It presented the view that machine translation (MT) was a practical proposition, since the act of translating from source to target language was not dissimilar to decoding an enciphered message. As an intermediary phase in the process, Weaver proposed the establishment of a metalanguage, later baptised with the unlovely appellation "machinese".

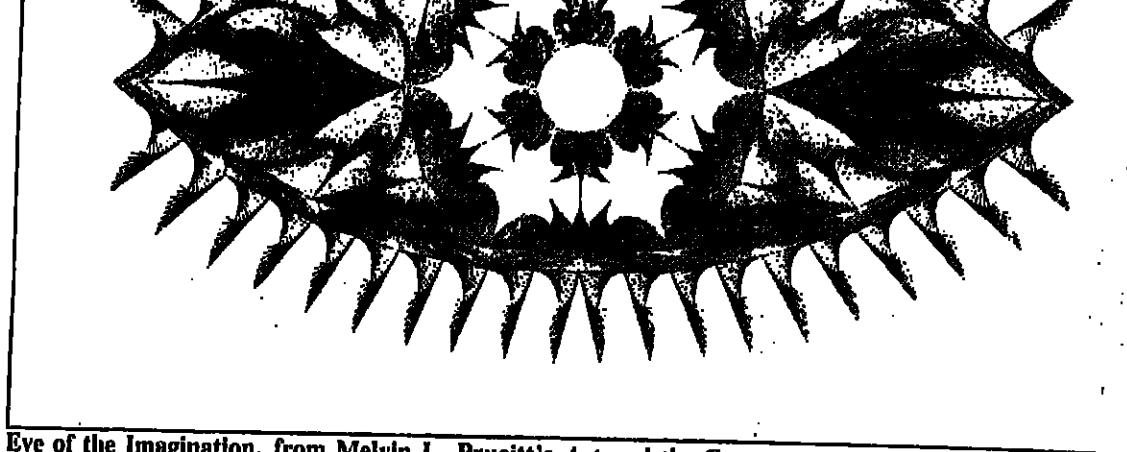
The heady enthusiasm engendered by this initiative soon ran into difficulties when it became apparent that on the semantic level human translators depend on a vast background of "world knowledge" which the researchers of those days despaired of ever feeding into their unwieldy machines. MT itself went into something of a state of suspended animation, although Chomsky's concept of transformational grammar gave added impetus to work in computational linguistics.

The next upsurge of computerphilia from among the non-scientific academic community came from a somewhat surprising source. In the late 1960s, a conference was held in the University of Cambridge on the subject of computers, language and literature. A number of researchers had, it seemed, scaled the ramparts of their local computing centre, and found to their surprise and pleasure that the natives were not so uncomprehending and friendly. As a result, various collaborative attempts were undertaken to analyse natural language text from a quantitative standpoint. Two factors

hitherto unknown in the arts were shared by all present at that conference: a committed enthusiasm for an uncharted territory; and a spirit of genuine collaboration and sharing of experiences and results (of which the former were rather more numerous than the latter). The conference was the first of a regular series of such gatherings now held under the auspices of the Association for Literary and Linguistic Computing (ALLC) - largely the brainchild of Joan Smith, then of the University of Manchester Regional Computing Centre, who recognized the early pioneering work and started a newsletter for circulation among a small band of pioneers.

The computer gradually attracted more and more enthusiasts, and the great concordance boom was well under way, although the quality of some of the early products left more than a little to be desired. Information retrieval, attribution studies (who wrote what), and the quantitative analysis of literary and non-literary text rubbed shoulders with projects based on the application of scientific techniques: spectral analysis to explore stress distribution patterns; and graph theory in textual criticism. Do-it-yourself concordancing was rendered more accessible by a software package, called COCOA, which enabled the non-programmer to analyse natural language text. That package has now been succeeded by a "friendlier" package, developed by Oxford University Computing Service and dubbed the Oxford Concordance Program (OCP).

My own interests were initially in



Eye of the Imagination, from Melvin L. Prueitt's *Art and the Computer* (McGraw-Hill, £26.25).

concordances, bibliography, and teaching computational stylistics; and it was almost by mistake that I wandered into computer-assisted language learning (CALL) a decade or more ago when the department of German at the University of Hull introduced an *ab initio* course and the students demanded more drilling practice. I therefore devised a question-and-answer package to monitor incorrect student responses; and, given the user-hostile environment of the Hull mainframe, the results were very encouraging. But it was the advent of the microcomputer which brought about a minor revolution in computer use. This had - and continues to have - a major impact on modern languages: CALL was born, and it soon became difficult to avoid computer-addicted linguists eager to demonstrate their latest electronic Henth Robinsonian endeavours.

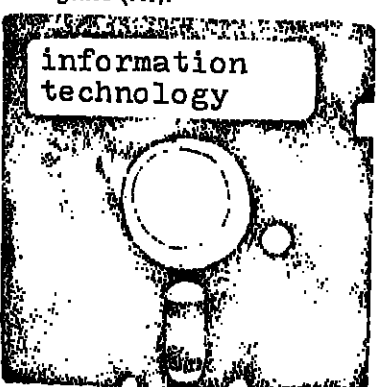
Although the tutorial mode, with its pattern of questions and answers, has so far been the dominant mode of CALL, this has been denigrated as mere drill and practice by those who think that computers should only be made to do more glamorous things or think that the creation of a new orthodoxy such as communicative competence automatically spells the doom of basic language acquisition techniques. The fact remains, however, that the acquisition of productive skills in a foreign language is no trivial undertaking, requiring dedicated effort and concentration in a way that no other discipline demands. Any aid which can help minimize the frustration and maximize the efficiency of the undertaking should be welcomed with open arms. CALL has demonstrated to the satisfaction of those who actually use it that it has a positive and crucial role to play, particularly in remedial teaching circumstances in which the learner with difficulties can explore and overcome them with the aid of a patient electronic tutor - but also in another, significant and unexpected, way.

So far, drilling has typically been an isolated activity, but when two or three learners are gathered together round a computer screen, discussion begins about the appropriate response, which both transfers the acquisition of active knowledge into a group activity and reinforces my view that the technology, properly applied at the minimum level to be effective, is a means to an educational end, not an end in itself. A fascinating technical problem in this area is that of managing incorrect responses from the learner, and reacting to them in an individual and constructive manner, rather than with the computing equivalent of a blank, disapproving stare.

Although the tutorial mode is a demonstrably effective teaching tool in certain areas of language acquisition, the computer can do far more than just ask questions and cope with answers. Other proven programs include cloze-type exercises (supplying words omitted at regular intervals in continuous text), word-order demonstrations and exercises, various dialogue programs based on street maps or adventure-type programs: even the word processor can play an invaluable role in the improvement of essay-writing skills. Moreover, microcomputers can be given a voice with a computer-controlled cassette recorder with rapid random access; and interactive video

promises sound and vision-enhanced CALL.

The debate about CALL has been simmering for some time. Educational technologists like Tim O'Shea of the Open University claim that, if computers do not react "intelligently" to the learner, it is not worth writing computer-assisted learning programs at all. On the other hand, I have consistently argued, like Graham Davies of Enling College, that it is important to learn how to crawl before flying. We are not convinced that programs heavily "customized" to interact progressively with the individual learner are either desirable or cost-effective in the complex business of language skills acquisition. Only now that the basic problems of CALL have been tackled and overcome by actual field testing and evaluation over a period of years is the time ripe to consider a much more difficult challenge, that of artificial intelligence (AI).



Put crudely, AI (though not exclusively the province of computers) falls into two categories: "toy problems" in a microworld problem domain, which are capable of satisfactory resolution (programs to play chess or move blocks around); and real-world problems (like machine translation) for which there is no foreseeable overall solution, but for which a number of partial solutions have been advanced. Somewhere in between is the expert system, which of all AI applications has the most respectable track record, and which uses "knowledge bases" built up in collaboration with human experts in order to simulate the reasoning processes of those experts in specific problem domains, such as the evaluation of geological data and the diagnosis and treatment of certain medical conditions.

Here in Dundee, two colleagues and I are investigating the possibilities of applying AI to CALL. Our first task was to hack our way through a dense jungle of marvellous buzz-words; the second was to recognize that AI is not a monolithic, fully-matured body of knowledge, but a collection of procedures and strategies for trying to cope with a very wide range of problem domains which have something to do with "intelligence", whatever that may be. We decided, therefore, to invert what seems to be the normal premises of an AI investigation: instead of stating a problem domain and then trying to persuade a computer program to cope with it, or at least parts of it, we are taking one step at a time into increasingly harder problem domains. The plan is to work towards a semantic parser for German which can interact meaningfully with a learner.

The first stages involve the use of specific word classes to investigate "interactive AI" programming using a

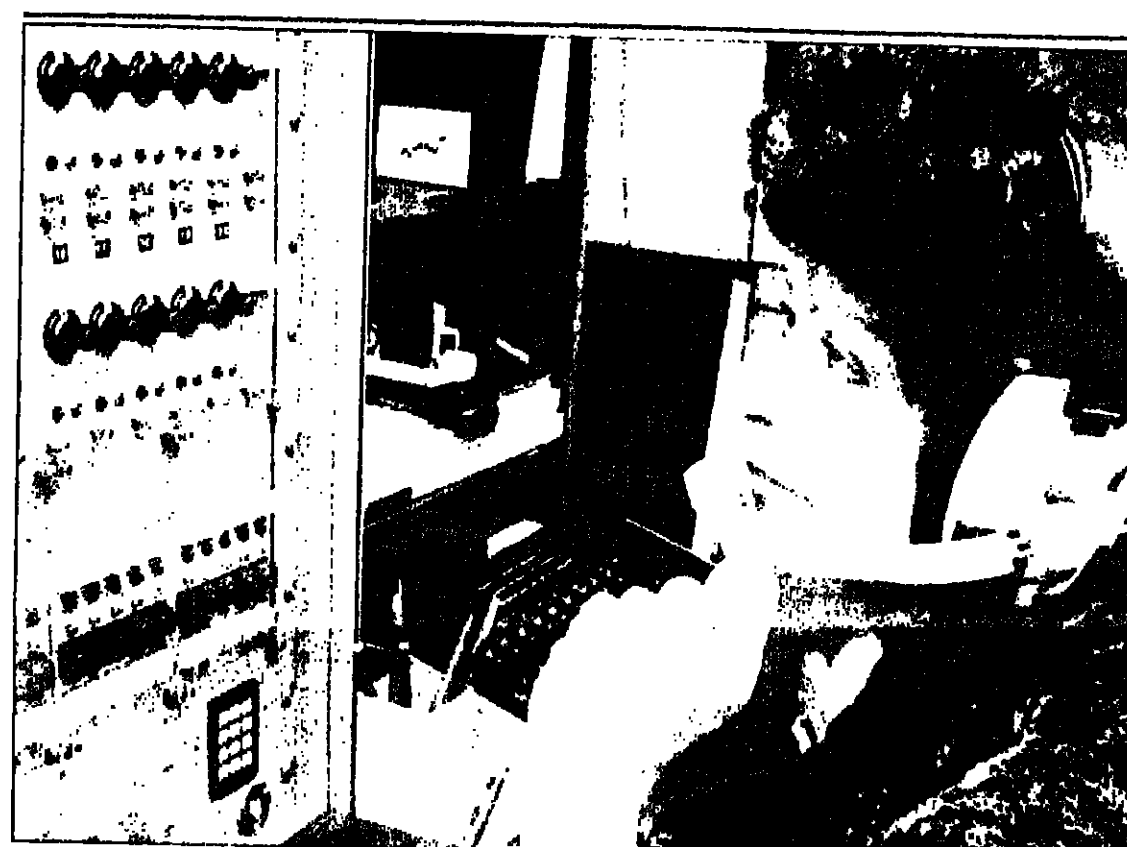
technique which we have dubbed the "inexpert system"; the noun program, for example, is given a handful of rules about the way in which the German substantive system functions. In collaboration with the user, the program tries to work out facts about nouns, improving its knowledge as it goes along, guessing if it has no knowledge, and checking with the user that it has got its facts right. After a while, and with appropriate "feeding", the program develops production rules enough for it to be in a position to deduce, for example, that an incoming noun ending in "heit" is feminine, abstract, and may not have a plural form. Equally, it should reason that "Tagel" may be a disyllabic feminine singular noun or the plural form of a monosyllabic masculine noun.

The idea is to explore how a program can interact with a learner in the construction of general rules from specific examples; to investigate the viability of a new kind of relationship between computer and user (not as teacher and learner, but as joint investigators of a problem or even with the computer stimulating a subordinate role); and to build a knowledge base of substantives which can later be linked with databases built up from other word classes in order to investigate interactive AI at the semantic level.

Literary and linguistic computing started off with a valiant but ultimately foolhardy endeavour to imitate the human translator in an early manifestation of AI. Now not only has MT recently undergone something of a revival, CALL has started to dip its toes into the uncertain and murky waters of AI. As a species, modern linguists have in the past been allergic to advances in educational technology. Once bitten by the language laboratory, a shiny new piece of hardware which promised so much but initially suffered badly from lack of good course material, they have been understandably shy of feeding the cheerful cries of the happy band of enthusiasts on the computer bandwagon, not least because of the less than admirable quality of some of the earlier ventures into modern languages teaching software.

Now that information technology is all the rage, university arts departments are falling over themselves to acquire microcomputers and word processors without being excessively aware of what precisely they should and could do with them. Equally, direct broadcasting by satellite has lately become fashionable, without its precise pedagogical role having been determined; and hovering in the wings waits the interactive videodisc. Although a laudable staff development programme is being undertaken in some institutions to enable modern languages lecturers to come to terms with and exploit the new technology, my fears are for those whose heads still remain buried in the sand. If they raise their heads too late, they may find that the last bandwagon has long since left town.

Rex Last is professor of modern languages at the University of Dundee, and author of *Language Teaching and the Microcomputer* (Blackwell, 1984), and co-author (with Ian Johnston) of *Language Teaching Software for the BBC Micro: a programming guide for the non-technician* (1984).



Above, PACNET bridge operator monitoring a conference; bottom right, students using a Darome loudspeaking telephone system.

Putting you through

Ray Winders on the advantages of meeting by telephone

Audioc conferencing is simply meeting by telephone. Three or more people using their desk or home telephones are linked together by a bridge so that they can speak with each other. A telephone can be replaced by a loudspeaking telephone unit which plugs into an ordinary jack socket and enables a group of people to participate from one site.

The bandwidth of normal telephone lines, however, only permits either voice or data transmission. More elaborate conferencing using television cameras to transmit live colour pictures normally uses satellites. Some compromises are in use or being explored: black-and-white pictures can be transmitted over a single line by a slow build-up technique known as a slow scan or freeze-frame; and the University of Essex is experimenting with a cartoon-style simplified image which can be transmitted live. All these systems are known collectively as "teleconferencing".

Audioc conferencing can be used to improve the effectiveness of meetings. A half-hour session to agree an agenda or to discuss matters arising facilitates business. Committee meetings can also be held by telephone; however, they do require particular care in preparation of papers and demand sensitive and positive chairing. Participants may welcome this discipline in that a one-hour meeting takes one hour, necessary decisions are made, and there is no tendency to make the meeting last until the tea and biscuits arrive.

The use of audioc conferencing for teaching and training is increasing: a Council for Educational Technology (CET) project in Ely used audioc conferencing to link rural primary schools to share specialist teaching; and a similar project linked sixth forms in North Wales to a local college to support "unconventional" sociology groups. The potential for distance

learning is enormous. From these early experiments a major national project was launched in February 1984: the Plymouth Audioc Conferencing Network (PACNET), supported by CET, British Telecom, Darome Corporation and Plymouth Polytechnic with substantial funding from the Open Tech Unit of the Manpower Services Commission.

Other parts of the world, especially the United States, have already made extensive use of teleconferencing media. The University of Wisconsin, for example, has 35,000 students enrolled for courses delivered and tutored by audioc conferencing. These include courses for bee-keepers and pigeon-breeders, where the participants gather in a rural school house or in someone's parlour. In Alaska more than 3,000 conferences per year are arranged by the Learn Alaska Network, which reaches rural and island communities including Eskimo groups.

Although in Britain problems of distance may not seem too serious, even an urban journey to an evening class can be tortuous for anyone without a car. Judith George of the Open University (OU) has used the telephone for tutorials in Scotland with marked success. One participant who walks to a telephone box in all weathers to meet her fellow students on the air, called this her "course lifeline".

PACNET is located in the Learning Resources Centre at Plymouth Polytechnic. At its core lies a 20-line bridge: participants ring in on "freephone PACNET"; they are welcomed by the operator and put into the conference at the scheduled time. The support given by the operator throughout the conference is a vital feature of the service. In addition to the operators, there are two full-time members of staff: the secretary/scheduler; and the coordinator, who concentrates on training users. There are now illus-

trated guides for chairpersons, participants and organizers. The very simplicity of the system can conceal the need for the careful planning and organization of meetings.

When the network was established, five categories of user were envisaged, all of whom have materialized:

- Courses held at more than one centre: a course in navigation was held at three Devon colleges using PACNET and the OU Cyclops device (now the Excom 100). The lecturer was able to work with three groups, none of which was viable by itself.

- Distance learning at home or in groups: the extramural department of the University of Exeter has tutored a group in horticulture using the telephone network. Each participant was using his own telephone.

- Students on industrial placement: students on placement can lose touch with their college and particularly with their fellow students. Advanced catering students in Brussels, Paris and Geneva were put in touch with their tutor at Brighton Polytechnic and with each other.

- Expert inputs to courses: a group using a loudspeaking telephone can be addressed by an expert from anywhere in the world. Geoffrey Crabb of CET discussed copyright problems with a group at Teeside Polytechnic from his desk at CET in London.

- Conferences, course committees, and so on: the Hotel and Catering Industry Training Board used audioc conferencing to refine an assessment scheme. The participants were in Norwich, London, Amersham, Sea-

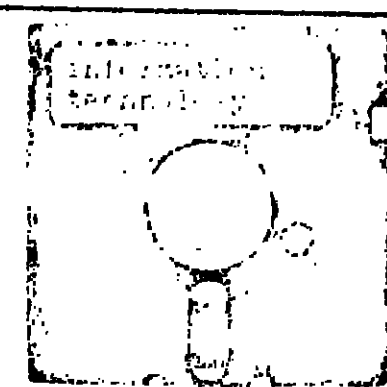
test, Lough and Durham, and then a group of experts gathered in a room.

● A technical use has been developed - the phone-in. When three experts on small business were linked from their homes to a phone-in more than 40 participants could get information during the advice of the hour. A specialist phone-in available to night-shift oil and gas technicians, could be used. Although the student ring-in with a phone-in quickly feedback confirms that mutual support from other students is motivating for a student working alone from a package.

In fact, it is this interactive feature of audioc conferencing that has most to offer education and training. Rather than lecture by telephone, material can be sent by post and then quoted and discussed live. An excellent example of the integration of audioc conferencing is a diploma in academics for local government officers. The course includes notes, guides, taped lectures and a three-day practical session. The audioc conferences last for 30 minutes, and topics for discussion are organized in advance in order to make the sessions as interactive as possible. No pressure is brought to bear on students who have not managed to keep up with the material, but the session itself helps to keep motivation high. Students ring in to the bridge at conference time from places as far afield as Lough, Jersey, Dorchester and Lough.

Audioc conferencing services are also offered by both British Telecom and the Darome Corporation. Although PACNET is funded as an education and training project, invoices to show the costs of conferences are sent to users so that realistic decisions can be made. We have recently prepared the following cost comparison for our users. Cost categories involved in face-to-face meetings/seminars vary in significance according to the start times and duration, the numbers involved, the mode of travel, and who is bearing the cost. The true total cost of face-to-face sessions can be represented as travel costs + subsistence costs + opportunity costs. The costs of a PACNET audioc conference are made up of: set-up charge: £25.00; line charge: 75 pence per line per 15 minutes; and call charges: to nearest 15 minutes at the freephone rate, according to the charge band. For example, the estimated cost of one to one and a half hour face-to-face session of the south-west regional meeting organized by Plymouth Polytechnic to discuss the Certificate in Education courses, with participants from colleges in Plymouth, Camborne, Bristol, Southampton and Taunton, is £384.00. The equivalent PACNET audioc conference costs are £109.00 per hour.

The major challenge is to create an awareness of audioc conferencing. In our experience, those who try audioc conferencing repeat their use, but there are many potential users who have not yet made a first attempt. Audioc conferencing is a new concept in education and training in Britain. Potential users have to be persuaded that they can work from their own desks or from their own homes without

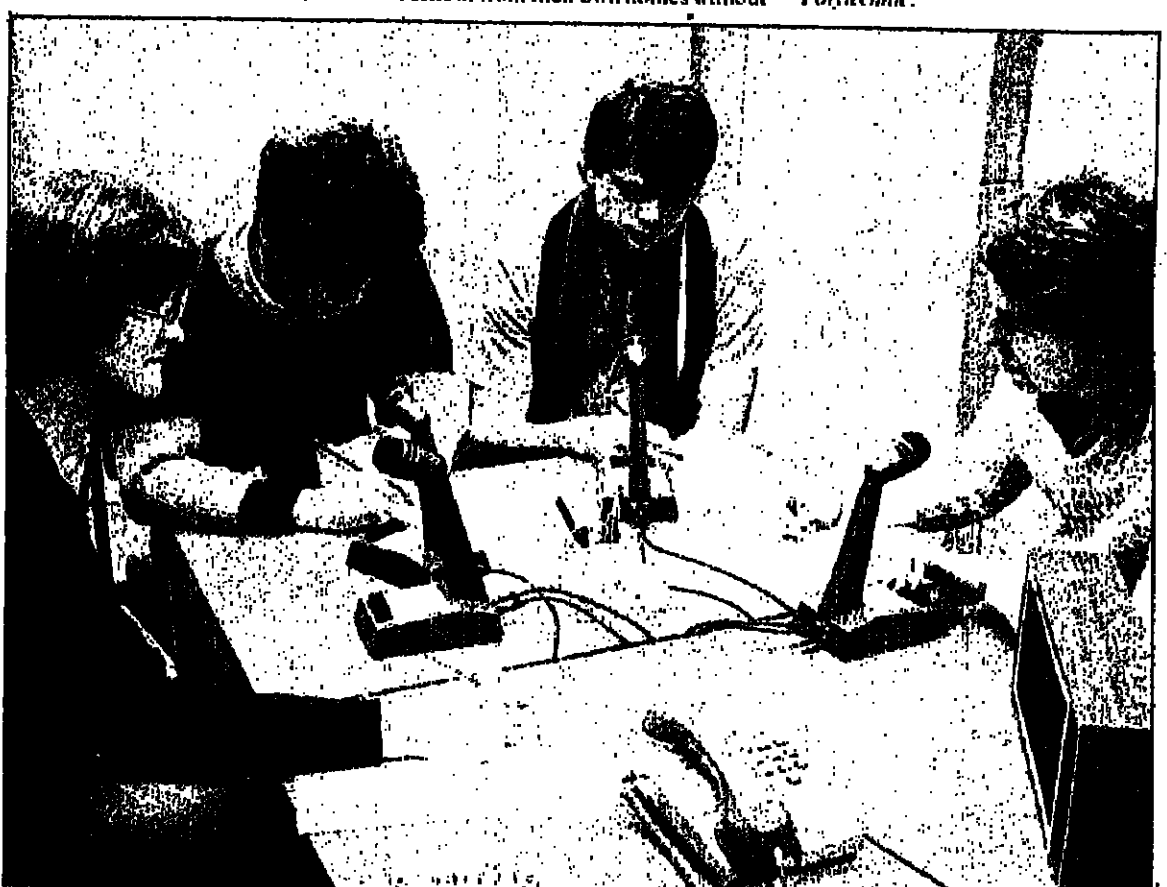


any special equipment. The technical simplicity of audioc conferencing for the user is not easily appreciated. The real challenge is to train users in the effective use of the system. Although there are no technical problems, an audioc conferencing system is a discipline. The facial expressions which indicate that other group members are interested, bored or ready to speak do not exist, so that for a group of more than three or four, a sensitive, well-organized chairperson is required. In co-ordinating meetings conducted by telephone, preparation of agendas, efficient timekeeping and general discipline are required. Some users have commented that they are able to hold a more effective meeting by audioc conference because, although these disciplines are essential, they are often relaxed or distorted in face-to-face meetings.

The third challenge is to develop visual displays to support speech. Ideally, communication would be between any microcomputer that participants had available. A modem which will enable data to be transmitted in the intervals between spoken words is being developed. This will enable conferences to view graphs, tables and reports and even by using word processing, agree forms of words. Viewdata, electronic mail, cellular radio telephones and other developments in information technology all offer challenges and opportunities. Students will be able to retrieve information and display it on a screen for discussion with their tutor and course colleagues. This will be an important stage in the development of truly open education and training for all ages and at all levels.

The fourth challenge is the development of new uses and new users. In rural areas of Wisconsin, users participate in courses for social as well as educational purposes. Audioc conferencing has untapped potential in continuing education, work with the handicapped, and in bringing the lonely and aged together. At the opposite end of the spectrum, developments in information technology are freeing staff from place constraints. The home-based office and consultancy will create new opportunities. Teleconferencing is not a substitute for face-to-face meetings: it is a new and creative system for business, social and educational communication.

Ray Winders is Director of PACNET, Learning Resources Centre, Plymouth Polytechnic.



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The Armstrong Multi Micro UNIX* System V

- now -

Processor, 10MHZ 68000 with Memory Management Memory; 512K bytes (may be extended in units of 512K bytes) Main disk 36M bytes winchester (larger may be specified)

8 x V.24 serial ports with M/S control

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Universities

UNIVERSITY OF BIRMINGHAM Faculty of Science and Engineering LECTURESHIPS

Following the UGC's announcement of its allocations to Universities for the "Shift to Science and Technology", applications are invited from suitably qualified graduates for Lectureships in the following areas with the following conditions:

1) CENTRE FOR COMPUTING AND COMPUTER SCIENCE
Lectureship in Computer Science (ref. 21)
Candidates should be qualified persons working in any area of Computer Science, but preference will be given to applicants having research and/or industrial experience in software engineering, communications, artificial intelligence, computational logic or other major areas of Computer Science.

2) DEPARTMENT OF MECHANICAL ENGINEERING
a) Lectureship in Applied Mathematics (ref. 02)
Candidates should have a background in Dynamics/Vibration, Control, Fracture Mechanics or in any other of the modern fields of the subject.
b) Lectureship in Advanced Manufacturing Technology (ref. 03)
Candidates should have a background or an interest in moving into the fields of Computer Integrated Manufacture, CAD/CAM, Robotics, Expert Systems, Industrial Application of AI or CAE in general.

The minimum qualification for these two posts is a good Honours Degree in any branch of engineering, physics, mathematical physics, mathematics or computer science.

3) DEPARTMENT OF ENGINEERING PRODUCTION
Lectureship (ref. 07)
The Department's main teaching and research interests are in Manufacturing Systems, Production Planning and Control, Industrial Design and Ergonomics, Operational Research, Quality and Reliability Engineering, Production Systems Management and Manufacturing Economics in any of the main areas of Engineering and Manufacture would be welcome.

4) DEPARTMENT OF ELECTRONIC AND ELECTRICAL ENGINEERING
Lectureship (ref. 02)
The Department has well funded broad-based active research programmes and candidates with experience in any of the following areas will be considered for appointment: Communications, Control, Signal Processing, Microprocessors, Electronics in manufacturing, industrial systems, integrated circuits, microcomputers, applications, power electronics, industrial systems, software engineering and design, and in any other of the modern fields of the subject.

Salary on the Lectureship scale £2,800-£14,925 plus superannuation.
For further particulars, telephone 021 474 1961, Ext. 2559 quoting reference number.

No formal application form. Three copies of application including full curriculum vitae and names of referees should be sent to the Registrar (Science and Engineering) P.O. Box 363, Birmingham B15 2TT by 10th July 1985.

THE UNIVERSITY OF THE SOUTH PACIFIC Suva, Fiji

Applications are invited for the following positions:
LECTURER/SENIOR LECTURER IN CHEMISTRY - POST 85/37
Applicants should have a proven record of teaching and research in analytical, inorganic or physical chemistry and some experience in administration will be an advantage. Compensation will be commensurate with qualifications and experience. Staff are expected to supervise postgraduate students for higher degrees and may be involved in supervising postgraduate students for research projects for associated University institutions. The successful applicant is expected to take up the position on January 1, 1986 or as soon as possible after this date. Appointment will be for a contract period of three years and may be renewable by mutual agreement.

LECTURER IN EDUCATION - POST 85/38
Applicants are sought with: (a) a degree in education or an allied area, preferably at Master's level; (b) qualified teaching experience at early primary school level; (c) up-to-date knowledge and experience of a variety of modern pedagogical approaches to primary and pre-school education including project, co-operative teaching, group work, open-plan, multi-media teaching, etc; (d) experience of preparing teachers for primary and pre-school teaching. An desirable would be the following further qualifications: (e) a postgraduate diploma or degree in education; (f) experience of distance education.

The successful candidate will be required to develop courses for primary teachers to be offered through distance modes as part of the in-service B.Ed. programme and to develop and conduct summer schools for the teachers. He or she must be prepared to travel to other countries to attend to the needs of the programme. Experience in teaching in the Third World, especially in the South Pacific, is an important consideration in the selection of the successful candidate. An interest in non-formal education and/or the extensive area of distance education would be an added advantage. Appointment will be for a contract period of three years and may be renewable by mutual agreement.

Salary scale: Lecturer F\$1,921-19,919; Senior Lecturer F\$19,925-22,815 (C1) - F\$1,491 on 11.6.85. Salary will be in accordance with qualifications and experience.

In addition, the University provides gratuity amounting to 15% of basic salary, appointment allowance and subject to the University's policy, partly furnished accommodation. 10% of the appointee's salary towards his curriculum vitae with full personal particulars, names and addresses of three referees and date of availability, to the Registrar or from the Secretary General, Association of Commonwealth Universities (A.C.U.), 26 Gordon Square, London WC1H 0PF, to whom candidates in UK also send an additional copy of their applications.

THE PAPUA NEW GUINEA UNIVERSITY OF TECHNOLOGY
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Applications are invited for vacancies in the following departments:
DEPARTMENT OF ARCHITECTURE AND BUILDING
LECTURER/III
Applicants should have a degree in architecture and teaching and research experience in undergraduate level.

DEPARTMENT OF ACCOUNTANCY AND BUSINESS STUDIES
LECTURER/III
Applicants should be suitably qualified to lecture in accountancy to students studying accounting and commercial computer studies. The successful applicant should have a minimum qualification in a degree in accountancy and micro and macro economics and extensive industrial experience.

DEPARTMENT OF AGRICULTURE
LECTURER IN AGRICULTURAL BIOLOGY
Applicants should possess a B.Sc. degree in zoology or biology or agriculture from a recognised university with preferably a PhD in agricultural entomology. Applications with teaching experience in agricultural entomology in tropical countries will be preferred. Duties include teaching of agricultural entomology in undergraduate and postgraduate programmes of the Department. Successful applicant is expected to initiate and conduct research on the major pests of food crops (Agave, banana, coconut, etc.) and to develop and implement control measures. The successful applicant is expected to supervise postgraduate students for higher degrees and may be involved in supervising postgraduate students for research projects for associated University institutions. The successful applicant is expected to take up the position on January 1, 1986 or as soon as possible after this date. Appointment will be for a contract period of three years and may be renewable by mutual agreement.

Salary scale: Lecturer £1,921-19,919; Senior Lecturer £19,925-22,815 (C1) - £1,491 on 11.6.85. Salary will be in accordance with qualifications and experience.

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DETAILED applications (two copies) with curriculum vitae together with the names and addresses of three referees and indicating earliest availability to take up post, should be sent to the Registrar, Papua New Guinea University of Technology, Private Mail Bag, Lae, Papua New Guinea by 19 July 1985.

JAMES COOK UNIVERSITY OF NORTH QUEENSLAND
Australia

Appointment of
VICE CHANCELLOR
The Council of James Cook University of North Queensland invites applications for appointment of Vice-Chancellor, which will be held by the University on 31 January 1986 when Professor K.J.C. Back leaves the University to take up the position of Executive Director of the International Development Program of Australian Universities and Colleges Ltd.

Suggestions of suitably qualified persons who may be interested in being considered for the position will also be welcome.

The Vice-Chancellor is the Chief Executive Officer of the University and should possess suitable administrative and academic qualifications.

The University reserves the right to accept applications after the closing date, to consider the position or to fill it by invitation.

Further information, including details of the information required of applicants, may be obtained from the Registrar.

Applications and nomination should be forwarded, under confidential cover, to the Chancellor, C/o The Registrar's Office, James Cook University, Townsville, Qld. 4811, Australia, as to reach him by 16 August 1985.

ADMINISTRATION and Business Management

THIS NEW JOB at the top level in an independent educational institution at Oxford entails taking overall responsibility for the management of all material and financial resources and all non-academic staff. It includes line responsibility for the work of the departments headed respectively by the Bursar and the Accountant.

ST CLARE'S COLLEGE provides residential educational programmes for some 300 young men and women students. Most work for the International Baccalaureate (which will serve to admit to there are two-semester Liberal Arts courses designed for American students, also academic year courses and summer courses in English as a Foreign Language.

MANAGERIAL, financial and administrative experience at executive board level (or equivalent) in a fully accountable self-contained enterprise, unit, company or institution is essential. (It need not have been in an academic or educational institution although that would be an advantage.) A good degree and/or relevant professional qualification would be an asset and could enhance future prospects.

Salary negotiable from £15,000 pa on pensionable or non-pensionable terms. Age preferably 45-55. Please send personal details in confidence to: T O'G Cochrane, Charity Appointments, 146 Queen Victoria Street, London EC4V 4HN.

Charity Appointments

University of Cambridge UNIVERSITY LECTURERS AND UNIVERSITY DEMONSTRATORS FOUR POSTS

In the Department of Anatomy

Applications are invited for four posts of University Lecturer or University Demonstrator (the equivalent of University Assistant Lecturer) in the Department of Anatomy. The posts will be filled by the University.

The successful candidates should be graduates in Medicine and will be required to teach and to contribute to research, for which there are facilities. The Department covers a wide range of subjects including: neuroanatomy, histology and cell biology.

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University of Liverpool DEPARTMENT OF ECONOMIC & BUSINESS STUDIES

In confirming its commitment to teaching and research in accounting and business finance, the University invites applications for

TWO POSTS OF
LECTURER IN
ACCOUNTING AND
FINANCE

In the Department of Economic and Business Studies. The successful candidates will be required to teach and to contribute to research, for which there are facilities. The Department covers a wide range of subjects including: accounting and business finance.

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Universities continued

Colaiste na hOllscoile Corcaigh University College Cork

PREVENTIVE AND PAEDIATRIC DENTISTRY

Applications are invited for a post as College Lecturer/Consultant in the Department of Preventive and Paediatric Dentistry in the University Dental School and Hospital. Candidates must have the FFD of the Royal College of Surgeons in Ireland or an equivalent qualification together with at least four years post-qualification experience in Preventive and Paediatric Dentistry. Candidates should also possess academic and, preferably, research experience with publications.

Salary: IR£28,220 p.a.

Application forms and further details of the post may be obtained from the undersigned.
Closing date for receipt of completed applications is Wednesday, 31st July, 1985.

M. F. Kelleher
Secretary
(020427)

Colaiste na hOllscoile Corcaigh University College Cork

Chemistry (Analytical)

Applications are invited for a full-time post as Assistant Lecturer/College Lecturer in the Department of Chemistry. The appointment will be in the area of Analytical Chemistry. Teaching and supervising duties will include responsibilities at undergraduate and postgraduate levels in Analytical Chemistry and also at undergraduate level in other branches of Chemistry. Applicants with a Ph.D. degree in Analytical Chemistry plus experience in the organisation and teaching of Analytical Chemistry to M.Sc. level and having active research interests in Analytical Chemistry will be particularly appropriate candidates. Consideration for appointment will also be given to applicants with a Ph.D. degree plus experience or research interests relevant to Analytical Chemistry.

The salary scales are -
College Lecturer IR£12,718 - IR£16,042 bar IR£16,368 - 18,364 p.a.
Assistant Lecturer IR£11,087 - IR£12,138 p.a.

Application forms and further details of the post may be obtained from the undersigned.

Latest date for receipt of applications is Wednesday, 31 July, 1985.

M.F. Kelleher, Secretary.

(020230)

University of Strathclyde SHIFT TO SCIENCE AND TECHNOLOGY

DEPARTMENT OF ELECTRONIC AND ELECTRICAL ENGINEERING THREE LECTURESHIPS

As a result of allocations under the Shift to Science and Technology initiative, the Department invites applications from suitably qualified graduates for three lectureships. Candidates should have special interests in one of the following areas:

Computational Aspects of Control Engineering;
Electronic Systems Design (with special reference to the development of educational software for CAD etc);
Optoelectronics; Telecommunications.

Salary on Lecturer Scale - £7,500-£14,925 (under review). USS benefit.

Full details and application forms (quote Ref: 21/85) are available from Staff Office, McCance Building, University of Strathclyde, 16 Richmond Street, Glasgow G1 1XQ.
Closing date for applications: 30 July 1985.

UNIVERSITY OF KENT AT CANTERBURY

Faculty of Social Sciences

Temporary Lecturer in Economics

Applications are invited for a post of Temporary Lecturer in Economics for the period 1st October 1985 to 30th September 1986. The Lecturer will have particular responsibility for teaching in the area of Macroeconomics.

Salary according to qualifications and experience will be on the scale £7,500-£14,925 per annum, but the appointment will not be made above the seventh point of the scale.

Further particulars and application forms are available from Mr. J. E. Reilly, Secretary of Faculties and Deputy Registrar, The Registry, University of Kent, Canterbury, Kent CT2 7NZ, not later than 22nd July 1985. Please quote reference number A48/85/THES.

(020260)

The University of Leeds Appointment of the University Librarian and Keeper of the Brotherton Collection

Applications are invited for the post of University Librarian and Keeper of the Brotherton Collection at the University of Leeds. The University Librarian, who will be responsible for the management of the University's library resources, will also be responsible for the Brotherton Collection, which contains nearly 2 million items and has some 27,000 registered readers, comprising the Brotherton Library, the Brotherton Collection, the Brotherton Manuscript Library, the Brotherton Book Collection, the Brotherton Map Collection, the Brotherton Photograph Collection, the Brotherton Film Collection, the Brotherton Audio Collection, the Brotherton Video Collection, the Brotherton Computer Collection, the Brotherton Database Collection, the Brotherton Internet Collection, the Brotherton Intranet Collection, the Brotherton Extranet Collection, the Brotherton Public Collection, the Brotherton Private Collection, the Brotherton Restricted Collection, the Brotherton Confidential Collection, the Brotherton Secret Collection, the Brotherton Top Secret Collection, the Brotherton Ultra Secret Collection, the Brotherton Black 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- (i) **SCHOOL OF ELECTRONIC AND ELECTRICAL ENGINEERING**
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(a) Microelectronics and VLSI System Design.
(b) Electrical Power Engineering with particular emphasis on electro-mechanical plant.
(c) Computer Aided Design and Computer Aided Manufacturing allied to the electronics and microelectronics industry.
(d) Microprocessor Systems with relevance to real time control.
(e) Information Systems Technology with particular reference to data communications and optical transmission systems.

- (ii) **SCHOOL OF MECHANICAL AND OFFSHORE ENGINEERING**
The following specialisms are of particular interest to the School. Candidates with specialisms in other related areas are also encouraged to apply and opportunities exist for developing specialisms in oil-related areas. Up to five posts are available.
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(d) Materials engineering/welding.

- (iii) **SCHOOL OF MATHEMATICAL SCIENCES AND COMPUTER STUDIES**
The following specialisms are of particular interest to the School. Up to three posts are available in this area.
Computer Science—to contribute in a BSc Mathematical Sciences Degree course, a Higher Diploma in Computer Studies, and to contribute to a proposed Honours Degree course in Computer Science.

Applications are invited from Honours Graduates for the above posts, preferably with recent industrial/research experience. Recent Graduates with limited experience are also encouraged to apply.

Salary ranges (under review):
Senior Lecturer £12,777-£16,104 per annum.
Lecturer £8,688-£13,716 per annum.
Assistance with removal expenses.

Details from:
The Personnel Department,
Robert Gordon's Institute of Technology,
Schoolhill, Aberdeen AB9 1FR
Telephone: (0224) 633611 Ext. 249



NAPIER COLLEGE
EDINBURGH

Napier College was designated a Central Institution in April 1985 and is formally assuming its full responsibilities with effect from 1st September 1985. It is now intended to proceed with 2 further senior appointments.

FINANCE OFFICER

Salary: £12,990-£14,370 (under review)
To be responsible for the Management and Control of the College's Budget; the presentation of Accounts, and the supervision of staff in the Salaries and Wages, Finance Accounting and Management Accounting Sections. Applicants must hold a recognised professional accounting qualification and have had substantial experience of financial management, preferably within Higher Education.

BUILDINGS OFFICER

Salary: £12,990-£14,370 (under review)
To be responsible for the maintenance, security and cleaning of the College Buildings and the maintenance and upkeep of the grounds. Duties will also include liaison with architects and other professional advisors on adaptations and major alterations and building projects, as well as supervision of the College's maintenance team. Applicants should hold a relevant professional qualification and have had appropriate practical and managerial experience, preferably within Higher Education.

Application form and further particulars available from: Administrative Officer (Personnel), Napier College, 218 Colinton Road, Edinburgh EH14 1DJ. Tel: (031) 447 7070. Ext. 274. (020281)

A Scottish Central Institution

DEPARTMENT OF MANAGEMENT AND LEGAL STUDIES

TEMPORARY LECTURER II/ SENIOR LECTURER

Due to staff reductions, the above is required for two years from 1 September 1985, to teach Commercial Law on the LL.B. degree, and contribute to the LL.M. degree course, and contribute to the Department.
Applicants should also be able to offer one or more of property law, public law, constitutional law.
A higher degree/professional qualification/teaching experience would be advantageous, though not mandatory.
Salary: £7,548 - £14,061 per annum inclusive (current pending).
Application forms and further details may be obtained from:

The Personnel Office,
The Polytechnic of Wales,
PO Box 100,
Cardiff CF1 1TL
Telephone: (0443) 409133
- extension 2021
CLOSING DATE: 19th July 1985.
Ref: 7804 (02027)

The Polytechnic of Wales

FOR DETAILS OF ADVERTISING IN THE T.H.E.S.

PLEASE RING

SUE PELOW 01-253 3000 EXTN. 226

Manchester Polytechnic
Department of Textiles
Fashion

PRINCIPAL LECTURER IN FASHION

3 year contract

Applications are invited from persons with design and/or fashion and textile experience to support the Government's initiative to increase the number of Graduates in Engineering.

The successful applicant will be expected to provide a high level of leadership and to take responsibility for the organisation and development of the Fashion BA (Hons) course. Ref: A/421.

Department of Electrical and Electronic Engineering

SENIOR LECTURERS

Applications are invited for the above appointments, particularly from graduates with recent industrial or research experience in at least one of the following areas: computer CAD, VLSI, power electronics, control systems, instrumentation. Ref: T/30.

Interviews will be held early in September.

Salary Scale: £12,777 - £14,184 (BAR) £16,104 - £18,688 - £12,777 (BAR) £13,716

Application forms from the Establishments Officer, Glasgow College of Technology, Cowdall Road, Glasgow G4 0BA, (tel: 041-352 7080) to be returned within 14 days of the appearance of this advertisement.

(02027)

Department of Biological Sciences

Candidates should hold graduate or equivalent qualifications in the subject of microbiology and have a postgraduate qualification in microbiology or a postgraduate research experience. Current active research interest is expected.

LECTURER II MICROBIOLOGY

To teach general microbiology up to honours degree level and to make a special contribution to the microbiology of the environment in either microbiology or an area of microbiology. Ref: T/31.

LECTURER II BIOMEDICAL SCIENCES

To teach biomedical sciences up to honours degree level and to make a special contribution to the microbiology of the environment in either microbiology or an area of microbiology. Ref: T/32.

LECTURER II PLANT BIOTECHNOLOGY

To teach plant biology and have a special contribution to the microbiology of the environment in either microbiology or an area of microbiology. Ref: T/33.

Vacancies exist for two appointments as full-time temporary lecturers from 1 September 1985 to 31 August 1986.

Candidates should hold a postgraduate degree in Aeronautical or Mechanical Engineering, and be particularly interested in Experimental and Theoretical Aerodynamics.

2) RESEARCH FELLOW COMPUTATIONAL FLUID MECHANICS

£8,226-£10,929 including London allowance depending on age and experience.

A major industrial company has given financial support for the appointment of a Lecturer to undertake research and development on the aerodynamics of a novel vertical axis wind turbine. Some teaching of undergraduate students in the general area of Thermofluid Mechanics will be required.

Candidates should hold a postgraduate degree in Aeronautical or Mechanical Engineering, and be particularly interested in Experimental and Theoretical Aerodynamics.

Research funding has been obtained from the NAB to appoint a Research Fellow to join an active Research Group in Fluid Mechanics and Aerodynamics, to develop and apply Computational Fluid Mechanics methods to support on-going projects in collaboration with industry and supported by SERC.

Suitable candidates should hold, or expect to obtain, a postgraduate degree in Engineering, Applied Science or Mathematics, and preferably have experience in mathematical modelling and fluid mechanics.

Both appointments will be for one year initially, with probable extension for two further years, starting September 1985.

Further details and application forms from Staffing Officer, Kingston Polytechnic, Penryn Road, Kingston upon Thames KT1 2EE. Tel: 01-549 1366. Ext. 305.

Closing date 19th July 1985. (02024)

TEESSIDE POLYTECHNIC

Department of Health and Community Studies

LECTURER II/SENIOR LECTURER IN NURSING STUDIES

Applicants should be Registered Nurses, preferably with an appropriate degree and also qualified as Community Mental Illness— or Community Mental Handicap—Nurse Tutors. Applications will, however, be considered from Registered General Nurses with an appropriate degree and an ability to teach aspects of the social— or behavioural— sciences in the context of health-care courses.

Salary: £7,548-£11,175 (efficiency bar)—£13,128 (work bar)—£14,061 per annum.

An appointment will be made at Lecturer II level and the maximum salary on commencement will be £12,099 per annum.

An Equal Opportunity Employer.

Application forms and further particulars from: The Personnel Section, Teesside Polytechnic, Borough Road, Middlesbrough, Cleveland TS1 3BA. Telephone: 0642 218121, Extension 4114.

Closing date for applications: Thursday 11th July 1985. (020287)

City of Birmingham Polytechnic

An equal opportunities employer

Computer Centre

LECTURER II/SENIOR LECTURER (2 POSTS)

The Polytechnic is implementing strategies in Computing and Information Technology, arising from the experience of courses at level two. Two posts have been established.

Applicants with, or expecting to obtain, an Honours Degree, or with significant experience in the use of computers are invited to apply.

An interest in one or more of the following would be an advantage:

Programming methodology, Systems development, Database systems, Computer networks.

Salary Scale: Lecturer II £7,548 - £13,099, Senior Lecturer £13,175 - £15,158 (1987) £14,061.

Further details and application forms from: Personnel Branch, City of Birmingham Polytechnic, 1st Floor, 77, The Quadrant, Birmingham B1 1TT. Tel: 021-356 9193, Ext. 819. Closing date: 12th July 1985. (01383)

Polytechnics continued

Department of Mathematics and Statistics

1. PRINCIPAL LECTURER IN MATHEMATICS

Required to take a leading role in the development of courses and teaching methods, the successful candidate will be expected to carry out research and consultancy in areas of interest to the Department.

2. LECTURER IN SENIOR LECTURER IN STATISTICS

Candidates should possess a good first degree together with a higher degree in Statistics, or appropriate research/industrial experience in Applied Statistics.

Learning Resources Centre

3. LECTURER IN SENIOR LECTURER IN EDUCATIONAL SERVICES

Educational Services support for Polytechnic staff in all areas of teaching and learning from course design to materials production. Specialist courses for the Certificate in Education FE and Post-Graduate Diploma in Educational Technology are also offered, and some teaching on these courses will be required.

Candidates for this post should have a higher degree in Education and be able to contribute to two or more of the following areas: evaluation of teaching and learning, structured learning, media, information technology, open learning systems.

Department of Geographical Sciences

4. LECTURER II IN PHYSICAL GEOGRAPHY (Temporary for one year)

Candidates should have specialisations in physical geography and the ability to contribute to the full range of quantitative teaching.

Salary ranges (Pay award pending): £13,095-£18,467, L1/SL - £7,548-£14,061 (level of appointment dependent upon qualifications and experience). L1 - £7,548-£12,099.

For further details and an application form, please contact the Personnel Officer at Plymouth Polytechnic, Drake Circus, Plymouth PL4 8AA. Tel: (0752) 284639. Closing date: 19th July 1985. (020270)

Plymouth Polytechnic
Drake Circus, Plymouth
Devon PL4 8AA

OXFORD POLYTECHNIC
DEPARTMENT OF GEOLOGY AND PHYSICAL SCIENCES
Lecturer II Senior Lecturer in Geophysics

The successful applicant will be expected to provide a high level of leadership and to take responsibility for the organisation and development of the Geophysics BA (Hons) course. Ref: A/421.

Department of Electrical and Electronic Engineering

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An interest in one or more of the following would be an advantage:

Programming methodology, Systems development, Database systems, Computer networks.

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Further details and application forms from: Personnel Branch, City of Birmingham Polytechnic, 1st Floor, 77, The Quadrant, Birmingham B1 1TT. Tel: 021-356 9193, Ext. 819. Closing date: 12th July 1985. (01383)

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City of Birmingham Polytechnic

An equal opportunities employer

Western Australian College of Advanced Education

The Western Australian College, which was established in 1981, has four campuses (Churchlands, Claremont, Mount Lawley and Nedlands) all situated within a 10 kilometre radius of the centre of Perth. In April 1985 some 10,000 students were enrolled, and the college employed 510 academic and 500 support staff.

1986 VACANCIES

An analysis of 1985 staffing needs has shown that it is probable that most of the following positions will need to be filled.

QUALIFICATIONS

Applicants should possess a Master's degree (or equivalent) with clear evidence of very good graduate level scholarship. Further, as the college is preparing students for particular vocations, strong preference will be given to applicants who have substantial relevant experience in the workplace. Consideration will also be given to teaching experience at the tertiary level.

DATE OF APPOINTMENT

It is expected that most applicants will be appointed from 1st January 1986 and will commence teaching in February.

COURSES

The college presently offers a range of post-graduate diplomas and first degrees in four major schools: Arts and Applied Sciences, Business, Community and Language Studies, and Education. All appointees will be required to teach courses in more than one school.

INTERVIEWS

It is expected that senior college staff will visit the United Kingdom after applications close to interview those applicants who have been shortlisted.

FORMAT OF APPLICATION

Applicants should apply immediately to Mr Graham Iggleeden, Western Australia House, 115 The Strand, London, WC2R 0AJ (telephone 01-240 2881) and obtain the format of application which the college requires. The actual full application should be sent direct to Perth as set out below. Please include telephone numbers.

LEVEL OF APPOINTMENT

Successful applicants will be appointed at one of the levels shown in the Salaries table, and this level will be determined on the basis of qualifications, academic merit, relevant work experience and teaching experience.

EDUCATION STAFF

All staff in the School of Education will participate in the supervision of Practice Teaching.

ARTS AND APPLIED SCIENCES

Computer Studies — Senior Lecturer

To provide educational leadership, and to lecture in one or more of the specialist areas in computer studies.

ASSISTANT LECTURER/LECTURER

Art and Design

To lecture in one or more of the specialist areas in art and design.

Computer Studies

To lecture in one or more of the specialist areas in computer studies.

Human Movement Studies

To lecture in one or more of the following areas: exercise physiology, sports medicine, principles of training, general games or outdoor pursuits.

Mathematics

To lecture in mathematics, particularly calculus and statistics (trainee secondary teachers).

Media Studies

To lecture in one or more of the following areas: script writing, communication studies, radio, television and film production, photography, or media studies.

Science

To lecture in one or more of the following areas: human anatomy and physiology, human development, human ecology, molecular biology, physics or chemistry.

Visiting Fellows

Applications are invited, both from academics and from professionals, for a position as Visiting Fellow to teach in any of the areas listed above, and in particular in: COMPUTER STUDIES, HUMAN MOVEMENT STUDIES, MEDIA STUDIES, SCIENCE.

Salary and travel arrangements will be negotiated.

BUSINESS

ASSISTANT LECTURER/LECTURER

Accounting

To lecture in one or more of the following areas: auditing, taxation law, financial accounting or accounting information systems.

Business Workshop

To contribute towards the ongoing innovation of learning experiences. To lead workshop sessions and act as a catalyst in group discussions and projects. Business experience in communication and the ability to motivate students would be an advantage. To assist in fostering and maintaining contacts with the public and private sectors. Recent business experience would be an advantage.

Economics and Finance

To lecture in one or more of the following areas: economics, finance, management science or business statistics.

Visiting Fellows

Applications are invited, both from academics and from professionals, for a position as Visiting Fellow to teach in any of the areas listed above, and in particular in: ACCOUNTING, FINANCE, LAW.

Salary and travel arrangements will be negotiated.

Principal Lecturer

\$42,810 or \$44,858 or \$48,387

Senior Lecturer

\$35,203 — \$41,029

Lecturer I

\$30,708 — \$34,487

Lecturer II

\$28,236 — \$30,000

Assistant Lecturer

\$22,814 — \$25,906

Appointments should be forwarded by the latest mail method available to:

The Staffing Officer,
Western Australian College of Advanced Education,
PO Box 217,
DOUBLEVUE Western Australia, 6018

Applications close in Perth on Wednesday 24 July 1985.

COMMUNITY AND LANGUAGE STUDIES ASSISTANT LECTURER/LECTURER

Aboriginal and Intercultural Studies

To lecture in Aboriginal and/or intercultural studies.

Community and Behavioural Studies

To lecture in one or more of the following areas: the aged and aged policy studies, human services administration (public and voluntary), community health care, youth work, residential care, or the disabled and handicapped.

Health Studies

To lecture in one or more of the following areas: sociology of health, community organisation and development in health education, or theories and philosophies of health education.

Language Studies

To lecture in one or more of the following areas: applied linguistics, interpreting and translating, German, Greek, Italian, Macedonian, Portuguese or Vietnamese.

Religious Studies

To lecture in one or more of the following areas: administration or facility planning, religion or psychology of religion.

Recreation

To lecture in general recreation studies and particularly in recreation planning, tourism, administration or facility planning.

Religious Studies

To lecture in one or more of the following areas: administration or facility planning, religion or psychology of religion.

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ENGLISH

Applications are invited from suitably qualified persons for appointment to the posts of Lecturer and Junior Lecturers in the Department of English. Junior Lectureships are yearly contract appointments of up to 4 years duration. Thereafter they may be extended on yearly contract for further 3 years. Duties are to be assumed on 1st January 1986.

Salary: Lecturer: R16,257—R27,648 Junior Lecturer: R10,875—R17,268 p.a.

AFRICAN STUDIES UNIT

Applications from suitably qualified persons for the post of Senior Research Officer or Research Officer in any of the following areas will be welcome: Social Anthropology, Industrial Sociology, Sociology, Women's Studies, Economics, Political Economy, Political Science, or History. As Research Officer you should hold at least a Masters degree in an appropriate discipline and as Senior Research Officer a Ph.D.

A three year contract appointment will be made. You are requested to enclose a brief outline of the project which you would hope to complete during the contract period. Duties are to be assumed on 1st October 1985, or as soon as possible thereafter.

Salary: Senior Research Officer: R23,916—R31,456; Research Officer: R16,257—R27,648 per annum.

Benefits: pension, medical aid, annual bonus, generous leave, remission of fees, housing subsidy, removal, travel and notting-in allowances (if eligible).

Submit a detailed curriculum vitae with the names and addresses of two referees and a list of publications where possible by 2nd August 1985 to Mr Geoff Henning, South African Universities Office, Chichester House, 278 High Holborn, London WC1V 7HE, England.

It is the policy of the University not to discriminate on grounds of sex, race, colour or national origin. (020292)

THE UNIVERSITY OF THE WITWATERSRAND

DARWIN INSTITUTE OF TECHNOLOGY

SCHOOL OF GENERAL STUDIES

LECTURER/SENIOR LECTURER

GRADE I EDUCATION STUDIES

Primary Mathematics Method

Position No: GS38

SALARY: Lecturer — A422236 — A430000; A430708 — A434467 p.a.

Senior Lecturer — A435203 — A437696; A438524 — A441028 p.a.

This position within the Department of Education Studies is to lecture in Primary Mathematics Method and to act as a contract position, however the Institute reserves the right to make a permanent appointment.

DUTIES: The successful applicant will be required to lecture in Mathematics Curriculum Studies (including methodology) in the Primary Diplomas of Teaching, Bachelor of Education and Graduate Diploma in Education.

Ability to supervise teaching practice will be essential and ability to teach in other areas of the Primary or Secondary teacher education programme will be considered an advantage.

QUALIFICATIONS: Minimum qualifications for this position are a higher degree or its equivalent in Mathematics or, preferably, Mathematics Education together with teaching qualifications and good primary school teaching experience. Previous teacher education experience is desirable.

COMMENCING DATE: 26 August 1985 or as soon as possible thereafter.

CONDITIONS OF SERVICE: In addition to salary a District Allowance of A42237 p.a. (with dependent) or A41277 p.a. (without dependent) is also payable. A copy of the Institute's Conditions of Service, together with an Information Statement on the above position and the Department will be forwarded on receipt of applications.

APPLICATIONS: Application forms can be obtained from: The Senior Personnel Officer, Darwin Institute of Technology, PO Box 40148, CASUARINA NT 1572, AUSTRALIA, or by telephoning (089) 294494.

CLOSING DATE: 31 July, 1985. (020283)

THE UNIVERSITY OF NEW SOUTH WALES

Faculty of Military Studies

ROYAL MILITARY COLLEGE

Duntroon, Canberra, ACT

DEPARTMENT OF HISTORY

LECTURER

(REF. 002)

Applicants should have high academic qualifications and relevant teaching experience in modern military history. Preference will be given to applicants with expertise in European military history, and an interest in Australian military history would be advantageous.

The position will be available from early 1986 and appointment will be on the basis of a contract for a fixed term of three years.

Further information from Dr R. C. Thompson (082) 66 3734.

Applications close 30th September, 1985.

Salary: Lecturer: A\$26,236 range A\$34,487 per annum.

Commencing salary according to qualifications and experience.

Applicants should forward two copies of their curriculum vitae, including telephone number during business hours and the names and addresses of two referees, to the Personnel Officer, Faculty of Military Studies, Royal Military College, Duntroon, ACT, 2600, Australia.

Staff in the Faculty of Military Studies will transfer to the new University College of the University of New South Wales at the Australian Defence Force Academy in 1986.

Equality of employment opportunity is University policy. (020284)



CENTRAL INSTITUTE OF TECHNOLOGY

Wellington, New Zealand

The Council of the Central Institute of Technology invites applications for the position of

PRINCIPAL

The Institute, 17 miles north of the capital city and sited, since 1972, on a 40-acre campus, is New Zealand's only Institute of Technology. As such it offers Diploma and Certificate courses of a full-time nature only in a range of disciplines at professional and technician level. There are eight Schools: Electronic Engineering, Engineering, Health Sciences, Hotel & Tourism Administration, Management, Occupational Therapy, Pharmacy and Science. The Institute also operates a regional Tutor Training Unit, responsible for teacher training of newly appointed tutors to the technical institute system.

Over 5,000 students are enrolled annually and the daily student population is around 1,500.

In order to avoid duplication of higher level courses throughout the country, many are offered only at CIT which is centrally situated geographically. The majority of students attending come from outside the local area. A 500 bed Halls of Residence is sited on campus.

The Principal is responsible to the Council for the development and operation of the Institute and for maintaining effective relationships with education authorities and industry, commerce and the professions.

The position is that of Grade 4 (top grade) of the Technical Institutes' salary scale with a current salary of NZ\$47,198. This is at present under review by the Higher Salaries Commission.

The successful applicant should possess appropriate academic qualifications and have had experience in tertiary education administration. Commercial and/or industrial experience would be of value. It is anticipated that the appointee will take up the position at the beginning of the academic year on 3rd February, 1986 but this could be subject to negotiation.

Application forms and documents containing further information regarding the position may be obtained from the Secretary of Council, Central Institute of Technology, Private Bag, Trentham, New Zealand. Applicants should address their applications, marked confidential and including the names and addresses of two persons from whom confidential references may be sought to: Mr I. G. Lythgoe, Chairman of Council, Central Institute of Technology, P.O. Box 1363, Wellington, New Zealand. (020263)

TEFL POSITION

10/9/85 - 12/7/86, renewable, in important engineering 'Grande Ecole' in Marseille. Applicants should be native speakers with recognized post-graduate qualification in TEFL or Applied Linguistics and experience. Knowledge of French highly desirable.

Salary: €780,000 p.a.

Interviews will be held in Paris in July.

Applications urgently to C. James, Bâtiment 88 rue des Sciences, 13288 Marseille Cedex 09, France. (020285)

THE UNIVERSITY OF NATAL

Department of Economics

PIETERMARITZBURG

Applications are invited from suitably qualified persons regardless of sex, religion, race, colour or national origin for appointment to the post of:

LECTURER

While lecturing will be the primary duty, the successful applicant will be expected to have an interest in research.

The appointment carries an attractive salary package, details of which may be obtained from the Staffing Section on request (telephone 0331 63320).

Applicants should submit a curriculum vitae, a list of references, and a salary offered will be determined according to the qualifications and/or experience of the successful applicant.

Application forms, further particulars of the post, and conditions of service are available from the Registrar, University of Natal, P.O. Box 378, Pietermaritzburg 3200, with whom application, on the prescribed form must be lodged so later than 7th August 1985,